PSYCHOLOGY IN THE SOVIET UNION

A Historical Outline

by Arthur Petrovsky

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Translated from the Russian by *Lilia Nakhapetyan*
Designed by *Alexei Lisitsyn*

А. В. Петровский
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INTRODUCTION

To understand the most controversial problems of modern science, one should necessarily have a knowledge of what Lenin called the basic historical connection, that is, one should understand why and how certain scientific conceptions developed, which are now components of current scientific problems, having retained some semblance of former disputes, traces of variegated influences and an imprint of the historical conditions under which they initially emerged. As the outcome of scientific experience, the history of a particular field of knowledge (psychology in this case) throws light both on the past and present of the science under review, and largely clarifies its future prospects.

Soviet science has always regarded the principle of historicism as development on the basis of materialist dialectics, which accounts for a sufficiently large number of scientific research works on the history of psychology published in the Soviet Union. These works, however, do not present a full picture of the development of scientific knowledge and ideological-theoretical struggle in Soviet psychology: the activity of some psychologists (such as Ivan Pavlov, Vladimir Bekhterev, Anton Makarenko) was reflected in dozens of articles and books, while the creative work of others was undeservedly ignored. Sometimes the choice of an object for investigation in the history of psychology depended on personal tastes and interests. In other cases, it was determined by the current political situation. Thus, understandably, it was far from

always consonant with the tasks facing the history of psychology as a branch of science. As a result, the map of research in the history of psychology contains many blank spots.

Among the investigations, there is a considerable number of monographs or articles devoted to the system or some of the psychological views of an outstanding scientist of the past and elucidating, wholly or in part, this scientist's creative efforts. While acknowledging the need for profound research into the views of individual scientists, representing a certain trend or school in science as bearers of a definite system of ideas and products of their own epoch, one cannot but see the limited nature of such an approach, especially when it becomes the main trend of a historical study. The personality of a psychologist, whose life and activity are investigated, more often than not screens the course of the historical process, so that the logic of science's development is replaced by the logic of scientific achievements of the given historical person. However, the structure and logic of the creative scientific activity of a scholar far from coincide with the structure and logic of the development of science as a form of social consciousness. Even the most detailed and accurate description of the views of an outstanding psychologist of the past cannot substitute for a dynamically fluid picture of development of the system of theoretical ideas, empirical knowledge and scientific research dictated by the needs of society. Not a single person, no matter how significant his personality, can provide the key to the historical meaning of this complex picture.

A scholar who places the personality of an individual person in the foreground of a historico-psychological investigation, thereby involuntarily accords to the historical process the role of a background, against which the main line of his work stands out. However, it is the historical process itself that should be central in a scientific study. The notion that the historical process is just the sum-total of isolated actions by individuals, devoid of any recurrence and objective regularity, pertains to subjectivist philosophy and is utterly wrong.

The object of study in the history of science is an objective system of social relations, taken in its progressive movement and reflected in the field of scientific knowledge.

The Great October Revolution which triumphed in Russia in 1917, liberated and revealed the energy of the masses and directed it towards building a new society without precedent in history. Profound changes took place in the field of scientific knowledge in the first few years after the revolution. These should not be reduced to the fact that science, which for the first time in history was directed towards the service of the people, began to accumulate a new kind of material and gravitated towards the building of socialism: the very foundation of scientific knowledge changed over to Marxist-Leninist teaching. Soviet scientists assimilated this teaching and it became an integral part of all scientific theories developed in the USSR.

The science of psychology also underwent profound changes. All trends in psychology that emerged at the turn of the 20th century, both in Russia and in other countries, were distinguished by their inability to interpret the results of all scientific research using a single criterion. As a matter of fact, the theoretical thought failed to reflect new scientific information. The contradiction between the developing spontaneous materialist experimental work and the subjectivist conception of consciousness seemed forbidding. Yet it was precisely in the first few decades of the 20th century that a decisive turn took place in the history of psychology: a science emerged and began to develop, which was the direct result of psychology's acceptance of Marxist-Leninist principles.

Soviet psychology assumes special significance today, because the tasks facing Soviet society demand an all-out development of all sciences dealing with human studies. Psychology is called upon to play an important role in resolving both theoretical and practical problems involved in the comprehensive development of personality, raising labour productivity, and protecting people's health. In this connection, the

study of the path traversed by Soviet psychology, a knowledge of its history and of how this science, which emerged in a bourgeois society, was transformed under the influence of Marxist-Leninist theory, is particularly important.

Historical material that needs to be analysed is immense indeed. The period of time we attempted to elucidate in this book witnessed the publication of tens of thousands of books, booklets and articles, several representative meetings, conferences and congresses of psychologists, and intensive creative work accomplished by many outstanding scholars, among them Ivan Pavlov, Vladimir Bekhterev, Pavel Blonsky, Vladimir Wagner, Lev Vygotsky, Konstantin Kornilov, Nikolai Lange, Alexander Lazursky, Anton Makarenko, Alexei N. Leontiev, Alexander Luria, Sergei Rubinstein and others, whose activity deserves close attention. Not to be lost in a boundless sea of facts to be analysed, we have used the dependable compass placed at our disposal—the Marxist-Leninist philosophy of history.

As applied to the question under consideration, this primarily signifies that a historian should not try to recreate the past in all details. The following idea developed by Lenin refers to all sciences, including history: "The sum-total of these changes in all their ramifications in the capitalist world economy could not be grasped even by seventy Marxes. The most important thing is that the *laws* of these changes have been discovered, that the *objective* logic of these changes and of their historical development has in its chief and basic features been disclosed..."[1] A historian should select facts corresponding to the objective interconnection between historical phenomena. The more fully and more deeply he reflects essential links between the phenomena he has undertaken to study, the closer is his work to truth.

One of the founders of the history of psychology in the

[1] V. I. Lenin, "Materialism and Empirio-Criticism. Critical Comments on a Reactionary Philosophy", *Collected Works*, Vol. 14, Progress Publishers, Moscow, 1977, p. 325.

Soviet Union, Nikolai Rybnikov, in suggesting how a psychology historian should tackle the tasks with which he is faced, identified the following main lines, as it is impossible to embrace everything in a historical study: "In the context of fulfilling the tasks that have been formulated [dealing with the history of development of psychological ideas.—*A.P.*], it is necessary to trace (a) the struggle for a materialist interpretation of psychology; (b) the struggle for psychology as an independent science dealing with the laws of psychology; (c) the struggle for psychology to occupy a place of its own among other sciences and in particular for its correct relationship with philosophy; (d) the struggle for a genuinely experimental study of phenomena connected with mental life, for a correct understanding of the role played by experiment and other methods of experimental research into mental processes; (e) the struggle for studying phenomena involved in mental life in terms of genetics; (f) the struggle for a dialectical interpretation of processes linked with mental life; (g) the struggle for a specification, differentiation and concretisation in studying phenomena pertaining to mental life; (h) the struggle for an organic merger of psychological theory and practice."

Essentially correct, this list, however, does not exhaust the content of a historico-psychological study. It only delineates the range of questions which a researcher should by all means explore. However, selection of the material to be analysed by a historian is, in the final analysis, determined by the specific features of an epoch that is the object of scientific investigation. The central task of the Soviet history of psychology is to reveal the struggle waged by Soviet psychologists for dialectical-materialist principles to prevail in the science, for an active participation in socialist construction, and to describe the decisive turning point in the development of science brought about by the October Revolution.

To characterise the ideological-theoretical struggle taking place in Soviet psychology over the latter half of the 1920s and 1930s, we have to repeatedly cite materials criticising var-

ious erroneous views of some psychologists. In so doing, we emphasise that the criticism was meted out from Marxist positions. However, one reservation should be made: it would be incorrect to assert that the psychologists who criticised certain psychological conceptions of others, themselves possessed at that time an integral Marxist-Leninist system of views in the sphere of psychology. In occupying the correct position in respect to one group of problems, they often were at a loss in facing others. Their theoretical development in this respect was uneven. At the same time, those psychologists who committed serious errors and thus became the object of devastating criticism, were sometimes on the correct path to discovering the possibility of resolving many other problems of psychology along Marxist principles. In other words, in analysing the erroneous views of certain Soviet psychologists and the principled criticism of these views by others, we are far from suggesting a division into Marxists and reactionaries of Soviet psychologists who were engaged in a search for ways to create the science of psychology. Such a division was accepted in the 1930s-1940s and was consonant with typical formulas of the period of the personality cult, but it contradicts the historical truth.

This study does not concentrate on the merits or demerits of a particular personality which played a positive or negative role in the history of Soviet psychology, but on criticism and self-criticism typical of all stages at which Marxist-Leninist ideas won ever new positions in psychology.

In the 1930s and 1940s, psychology experienced, of course, the impact of the cult of Stalin's personality and the general situation prevailing in science. It caused distortions, manifested in unjustified accusations and repressions against many honest scientists (among them I. Spielrein, A. Talankin, L. Gershenovich), as well as in the tense atmosphere in which debates on vital scientific problems took place, in readily tacking on political labels, and in uncalled-for rudeness. These developments could not but affect the fate of some specific areas of psychology, in particular, psychotech-

niques, child, social and forensic psychology, which could not progress in conditions when socialist legality was trampled upon and grave mistakes were made in the management of the economy, agriculture and education.

Sometimes, when a scientist was criticised (and quite rightly) for some specific theoretical blunders, his entire scientific work, even though free of any error, was withdrawn from circulation. This was the fate of the works of many outstanding Soviet psychologists, among them Pavel Blonsky, Mikhail Bassov, Lev Vygotsky. The works of Vygotsky and Blonsky were reprinted and analysed only in the late 1950s. This situation interfered with the study of the history of Soviet psychology and prevented an objective assessment of many recent events. It possibly led the majority of scholars to turn to the history of Russian psychology of the 18th and 19th centuries rather than study the recent past.

The 20th Congress of the Communist Party of the Soviet Union (1956), which denounced the Stalin personality cult, created favourable conditions for the study of the history of social sciences in the USSR, and in particular, the history of Soviet psychology. These opportunities could not be realised, though, in the following period, especially in the 1970s. Objective conditions for a principled and historically correct assessment of all the most important events, all prominent and original scientists, and all trends which left a mark in the history of Soviet psychology, have been established only after the 27th CPSU Congress (1986). There are still considerable difficulties linked with the need to separate, very carefully and precisely, the outgrowths of dogmatic assessments from the sound tissues of Soviet psychological science—and this is one of the most important duties for a Soviet historian of psychology.

This book deals with a very important period of time in the almost a hundred years' development of psychological science in Russia. This explains why dividing the history of Soviet psychology into periods is of particular importance.

A historian of psychology, as of any other science, should stick to the principle of periodisation, according to which it is not exact dates or specific events, no matter how important, that are taken as borderlines between periods, but the time of accomplishment of the fundamental tasks which were dominant at the previous stage. Indeed, it is only such accomplishment that distinguishes, in terms of a science, the end of one and the beginning of another historical period, while the tasks fulfilled and the way they are tackled in each concrete case make up the main content of scientific development within the time limits of a given period.

Four main periods in the development of psychology in Russia should be singled out in the time under review in accordance with this principle; each demands a different approach and will be set apart from the rest not only by the specific content but also by the form of presentation.

The first period begins in the early 20th century and ends in the early 1920s, i.e., under Soviet power. With certain reservations, this period can be called the pre-history of Soviet psychology. It is essentially characterised by a crisis in psychology as a result of the contradiction between experimental methods of research based on the principles of spontaneous materialism, and the subjectivist theory of psychology relying on idealist philosophy. Under these conditions, three trends emerged and developed in psychology: philosophical speculative psychology, empirical psychology and natural-scientific psychology. The first trend prevailed in Russia before the October 1917 Revolution, though it came under criticism from the natural-scientific trend which was spontaneous-materialist in essence and was closely connected with the traditions of Russian natural science.

After the October Revolution, old philosophical psychology lost its dominating position and soon left the battlefield. The two remaining trends—empirical and natural-scientific—tried to realise their own programmes of laying the basis for the science of psychology. The task, however, proved to be beyond their power, since the essence of mental life was inter-

preted metaphysically as in the past. This was not in conflict with the denial of the role and importance of psychology typical of various schools of so-called objective psychology. As a result, in the early 1920s, there arose the vital need to provide psychology with a single theoretical platform; understandably, that role could only be played by dialectical materialism.

The second period began in the middle of the 1920s and ended in the late 1930s. The main task confronting Soviet psychologists was the formulation of the theory of psychology based on a Marxist foundation and implementation of it in practice. Serious idealistic and, in particular, mechanistic mistakes were overcome as this task was fulfilled. Soviet psychology relied on the Leninist theory of reflection. As a whole, the problem was resolved in the late 1930s, when the principles of Soviet psychology were theoretically formulated in the works of Soviet scholars.

The third period set in at the end of the 1930s and the beginning of the 1940s; it could be conventionally called the modern history of Soviet psychology. The central task Soviet psychologists confronted in the course of this historical period was creation of the system of Soviet psychological science based on Marxist-Leninist theory, and bringing all scientific concepts, laws and problems in conformity with general principles, i.e. the search for ways in which Soviet psychology as an integral system of scientific knowledge could be linked to the national goal of building socialism.

The author employed a new approach in selecting and presenting material in this book to characterise the third period. He described, in brief, all the most important events which took place in psychology during the period and, well aware that it is impossible to embrace the entire empirical material accumulated by researchers, concentrated on the main theoretical conceptions which developed in the 1950s-1970s. Thus the reader can not only learn of these theories, but also become "acquainted" with the "list of characters" of Soviet psychology, whose outstanding works and

ideas have an impact on the development of both its main lines and particular areas even today.

And finally, the fourth period, that of psychology's "recent history", i.e. the 1980s. This period presents particular difficulties to the author. With preceding periods, he was a subject in historical investigation, having the right not only to describe but to assess key events, ideas and the most acute moments in theoretical polemics, and not to be troubled about the objective nature of his assessments. The situation changes drastically when he turns to the current period of Soviet psychology, since he himself actively participates in many events, reveals his own position, develops his own views and polemicises with his colleagues. In other words, the subject of historical investigation becomes in this book to a certain degree its object. Of course, the author tries to be objective, but he is not foolproof against accusations of a subjective approach. There is a number of circumstances that cause a historian to set the 1980s apart as a special period in the history of Soviet psychology, calling for a close analysis.

The 1980s are distinguished by an extremely significant event—the launching of *perestroika* of social life in the Soviet Union, whose fundamental lines were defined by the 27th Congress of the CPSU. Tremendous activity started to translate into life the Leninist conception of socialism, which concentrates on democracy, humanism and the individual. As should be expected, the problem of personality was projected into the foreground of psychological research. One may ask: Was it one of the new circumstances typical of Soviet psychology in the contemporary period of its development? Psychologists, however, have considered the study of the personality as their central task ever since the 1960s. Nevertheless, only in recent years has a radical change occurred in understanding the tasks involved in such studies, because for a long time psychologists substituted subjective interpretation for an objective image of the human personality. An ideal speculative model had to reflect the personality of Soviet man as it should be. No doubt, an ideal model is neces-

sary, because it provides much-needed orientations—if we deal with a pedagogical, educational problem. But when that which should be is declared to really exist, this obstructs the path of genuine scientific research, replacing it with wishful thinking, and mythologises personality rather than analyses it. Today psychology, like other social disciplines, is beginning to study real man in actual conditions of life, trying not to obscure but to reveal the contradictions he faces in his development. This circumstance serves to define certain aspects of restructuring underway in psychology and affects all its main branches where the problem of personality is seen as a key one. As a matter of fact, it seems that almost the entire problematics of psychology at present pivots around it. The personality of Soviet man is a central figure in Soviet society's restructuring. No wonder, therefore, that the problem of personality becomes central in the evolution and interpretation of Soviet psychology at the present stage of its history.

The recent period in the development of Soviet psychology deserves particular attention because of its specific approaches. Actually, here the history of psychology turns into its theory and the past flows into the present without breaking off.

As a rule, the reader becomes acquainted with a book in its Introduction, which the author usually writes after finishing his work. As he looks back, this writer realises that he has failed to embrace all the vital problems in the evolution of the fundamental principles of Soviet psychology and has not elucidated that evolution from all possible angles. However, since in trying to tell everything, one may fail to tell anything at all, or to tell but little, he tried to describe in this book what he deems to be most important. This is to trace a definite logic of the process of psychology's formation as a scientific discipline by its adopting the principles of materialist dialectics, and to highlight the historical path blazed by Soviet psychology for all other psychologists to follow, despite all difficulties and errors.

Chapter One

THE GENERAL STATE OF PSYCHOLOGY IN RUSSIA BEFORE THE OCTOBER REVOLUTION

The period before the Socialist Revolution (October 1917) was marked by political reaction and a new revolutionary upsurge followed by the polarisation of forces in all spheres of Russia's social and scientific life. All sciences, first and foremost those studying man and human society, faced the dilemma of either trying, by all means at their disposal, to justify capitalist society, thereby displaying loyalty to the existing system, or openly coming into conflict with the ruling classes. Russian psychologists also faced the same dilemma. At that time, psychology was one of the disciplines which clearly demonstrated the fact that science has a party, class nature.

The evolution of psychology in pre-revolutionary Russia presented a complicated process which took place within a grave methodological crisis. The actual meaning of what was going on in the science of psychology at that time is overshadowed by the struggle of schools and trends, the inconsistent and eclectical nature of the views of many psychologists, and the duality and compromises of their positions. Thus, the development of psychology on the eve of the October Revolution cannot be depicted as a single current. However, one cannot agree with those writers who adhere to the opinion that progressive traditions were largely lost by Russian psychology a few decades before the Revolution. Soviet psychology did not emerge out of nothing, or through complete destruction of the old. Actually, it inherited the vast material accumulated through psychological research and a number of

methods and theoretical ideas produced by progressive thinkers in natural and social sciences.

The period under review was noted for the crisis in bourgeois psychology. Crisis phenomena penetrated the whole of the science and were reflected in all its areas, branches and schools. The underlying reasons for the crisis in Russia are the same as in the West: the growing contradiction between the developing spontaneous-materialist experimental practice and the subjectivist conception of consciousness that could be traced to René Descartes and John Locke.

Wilhelm Wundt, a German physiologist and psychologist, is known as the founder of European bourgeois psychology. Many outstanding Western psychologists, who were active at the turn of the 20th century, passed through his laboratory in Leipzig. Many schools of psychology appeared at that stage in response to Wundt's conception of psychology. Thus, behaviourism and reflexology challenged the thesis of the exceptional importance of studying the immediate mental states, which was emphasised by the Wundt school. Opposition to Wundt's elementalism called to life Gestalt psychology. Moreover, the close attention the Wundt school paid to general laws of the psyche gave impetus to the emergence of differential psychology and various trends of individual psychology (Freudianism included). Psychotechniques also emerged as a reaction to the separation of Wundt's psychology from practical needs. The variegated psychological schools of that period largely departed from the teaching of Wundt, both in purpose and method of research. Psychophysical parallelism underlying theoretical principles of psychology developed by Gustav Fechner and Wilhelm Wundt, actually provided opportunities both for the development of idealist epiphenomenalism and vulgar materialist physiologism.

Russian psychology and, in particular, its empirical schools, as part of European psychological science, followed the same path. These included: experimental psychology of Georgi Chelpanov, which synthesised Wundt's "physiological" psychology and the "achievements" of the Würzburg school, to a

certain degree close to pathopsychology and pedology; applied psychology of Grigory Rossolimo; experimental pedagogy of A. P. Nechayev; the theory of the "dynamics of internal life" formulated by K. Kosman. They existed side by side and enjoyed equal rights. The picture of the great variety of psychological schools in Russia becomes still more clear if we add the surviving psychological schools of pre-Wundt metaphysical German psychology (psychological systems of Lev Lopatin, Alexander Vvedensky, Semyon Frank). Nikolai Lange wrote with justification that "there is no general, i.e. generally recognised system in our science. It has disappeared together with associationism. The psychologist of our day may be likened to Priam at the ruins of Troy." However, the course of development of Russian pre-revolutionary psychology greatly differs from that of Western psychological thought.

The chief distinction of Russian psychology is its materialist traditions, rooted in the views of Mikhail Lomonosov, the first Russian natural scientist, Alexander Radishchev, a revolutionary thinker of the 18th century, and the theories of Russian revolutionary democrats Vissarion Belinsky, Nikolai Chernyshevsky, Nikolai Dobrolyubov and Alexander Herzen, mediated by the work of Ivan Sechenov. It is these traditions that determined the most important direction of the evolution of our psychology not only in the 19th century, but also in the 20th century. As Kliment Timiryazev once noted, the wave of "metaphysical speculation" was powerless to engulf Russian science. Even outright enemies of materialism cannot deny that Russian philosophical and scientific thinking is noted for its long-standing materialist traditions. Thus, in 1924, Mikhail Novikov, who emigrated from Russia, complained that the "philosophical content" (i.e. metaphysical philosophy) was "never understood" in Russia, so that idealists O. Novitsky, P. D. Yurkevich, V. V. Lesevich, V. V. Rozanov, V. S. Solovyov and others were always "treated badly". For example, Yurkevich, in his opinion, was "tortured to death" by Chernyshevsky. Actually, it is because of these remarkable materialist traditions that in the early

20th century Russia witnessed the emergence of psychological theories which were far ahead of their counterparts in the West. One example is the natural-scientific trend with which we shall deal below.

Back in 1894, Lenin exposed the typical manner of formulating psychological theories and systems relying on a priori, dogmatic and abstract discourses and convincingly showed that all these "theories" were abortive due to their fallacious method and their outright metaphysical nature.[1] Outlining in brief a wide sphere of philosophical-psychological research (which at that time claimed the exclusive right to be called scientific psychology), Lenin pointed out their principal methodological error—rejection of objective analysis, lack of serious treatment of facts and inability to establish conceptions. "The metaphysician-psychologist argues about the nature of the soul. Here it is the method itself that is absurd. You cannot argue about the soul without having explained psychical processes in particular: here progress must consist precisely in abandoning general theories and philosophical discourses about the nature of the soul, and in being able to put the study of the facts about particular psychical processes on a scientific footing."[2]

Lenin's assessment of psychologists engaged in a speculative argument about the nature of the soul and regarding their task to be "reviewing" all philosophical constructs of the soul from the positions of metaphysics, retains its value over the whole pre-October period of psychology's development in Russia. Pavel Blonsky, who sided with philosophical idealism before the revolution, bitterly wrote somewhat later: "It gives you the shudders to think of the pitchdarkness of intellectual atavism into which a number of 'generally-recognised' philosophers of our age stay plunged, how far removed

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[1] See V. I. Lenin, "What the 'Friends of the People' Are and How They Fight the Social-Democrats", *Collected Works*, Vol. 1, 1986, p. 143.

[2] *Ibid.*, p. 144.

from contemporary life their mind is, and what primitive minds and world outlook these savages, clad in professorial frock-coats, possess. They are in fact the *Plusquamperfekt* of the 20th century. Yet they couldn't be otherwise. Indeed, it is only people with such savagely-primitive mind and such an unconsciously atavistic world outlook who could be intellectual leaders in the epoch of international manslaughter and cruel suppression of the people. These people were in no position to create philosophy of a higher vintage."[1]

Criticising metaphysical psychologists, who dedicated their lives to writing "investigations" into the nature of the soul but who did not know "exactly how to explain a single psychic phenomenon, even the simplest", Lenin also leaves no room for positivist, empirical constructs, which try to avoid tackling fundamental scientific problems. In the same work he proclaims unity of theory and practice. Criticism of metaphysical psychologists is preceded by a profound, comprehensive analysis of the Marxist conception of materialism in sociology. "Naturally, *for the time being* it was only a hypothesis, but one which first created the possibility of a strictly scientific approach to historical and social problems."[2] The hypothesis, advanced by Karl Marx in the 1840s, contains a materialist conclusion concerning the dependence of the course of ideas on the course of things, which, as Lenin noted, was "the only one compatible with scientific psychology"[3]. On the basis of a mass of facts, Marx analysed in detail the laws governing the system of commodity economy. This scientific analysis, Lenin noted, should become a model of a genuinely scientific study. In studying this work by Lenin, a scientific psychologist could arrive at the conclusion that it is not creeping empiricism, and not blindly following facts that is opposed to metaphysics in psychology, but scientific theory,

[1] P. P. Blonsky, *Reform of the Science*, Moscow, 1920, p. 8 (in Russian).

[2] V. I. Lenin, "What the 'Friends of the People' Are and How They Fight the Social-Democrats", *Collected Works*, Vol. 1, p. 139.

[3] *Ibid.*, p. 140.

scientific interpretation, explanation of facts on the basis of their objective analysis. As Lenin noted, "the scientific psychologist has discarded philosophical theories of the soul and set about making a direct study of the material substratum of psychical phenomena—the nervous processes—and has produced, let us say, an analysis and explanation of some one or more psychic processes."[1]

There was a scholar living and working in Russia at that time who embodied all the qualities of a scientific psychologist mentioned by Lenin. It was Ivan Sechenov, who studied the material substratum of mental phenomena—the brain, and formulated the determinist theory of mental activity, relying on an objective analysis of psychic processes.[2]

In his "What the 'Friends of the People' Are and How They Fight the Social-Democrats", Lenin displayed a profound understanding of the tasks facing the science of psychology. And in his "Materialism and Empirio-Criticism" he elaborated the theory of reflection, which laid a philosophical basis for dialectical-materialist psychology. The theory of reflection defined in principle the possibility of fundamentally resolving the most important psychological and gnoseological problems, in particular the problem of the essence of the psychical and of the relationship between the mind and the brain (a psychophysical problem), between the reflection and the reflected object, the subjective and the objective, sensation and thinking, and the problem involved in the development of the psyche. Thus, Lenin embraced in his work the entire range of fundamental issues which were then debated in Russian and Western psychology.

Prior to the October Revolution, the amazing wealth of Lenin's ideas was not utilised by the science of psychology in Russia. As a result, no psychological theory based on Marxist-Leninist philosophy came into being at that time. There

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[1] *Ibid.*, p. 144.

[2] See M. G. Yaroshevsky, *The Problem of Determinism in 19th-century Psychophysiology*, Dushanbe, 1962 (in Russian).

is only a hint of a possibility that certain propositions Lenin formulated in his "Materialism and Empirio-Criticism" might have exerted an impact on Nikolai Lange's *Psychology* which was published in 1917.

The methodological crisis in psychology, which was aggravated on the eve of the revolution, makes it difficult for a historian of psychology to analyse the relationship of forces in the science of psychology at that time. Psychological schools manifested similarity of views on some issues and essential differences on others. Their solutions of the fundamental question of philosophy were often obscured by positivist, Machist and neo-Kantian influences, and sometimes by the eclectical nature of certain inclusions in their constructs. Thus, the genuine methodological platform of each particular psychologist could hardly be discerned. The crisis in psychology's philosophical principles brought to light actual contradictions between progressive and reactionary forces within the science and led to their division. At the same time it prevented them from realistically assessing these contradictions and their grass-root causes. Thus, Chelpanov tirelessly repeated, over some 20 years before the revolution, as he firmly shut his eyes to reality, that the crisis in psychology "has passed". Lange, while recognising that the crisis still continued, thought it to be "fruitful", because, as he saw it, it destroyed the old subjectivist psychology. Neither of them was aware of the causes which had produced that crisis and neither of them knew, nor could they know because of their historical shortsightedness, how to overcome it.

There were three main directions in psychology at that time, distinctly shaped and opposed to one another, each of which in turn fell into many schools. They can be conditionally designated as philosophical, speculative psychology, natural-scientific psychology, and empirical psychology.

The extreme right grouping of Russian psychologists included psychologist philosophers Lev Lopatin, Alexander Vvedensky, Semyon Frank, Nikolai Lossky, Ivan Lapshin and others, siding with various schools of philosophical idealism

(intuitionalism, neo-Kantianism, Ideal-realism, personalism). They utilised their professorial posts in higher educational establishments to propagate reactionary views on the essence of the psychical, to "prove" the substantial nature of the soul, and to "refute" materialism. They consciously retarded the development of psychology and tried to "save" it from the encroachments on its "purity" by empirical psychologists, modest as they were at that time. On the most important and principled issues this trend gravitated towards official Orthodox ideology. Thus, quite logically, many of these scholars eventually took holy orders. Lossky, for example, began his career with the propagation of intuitionalism along the lines of Henri Bergson and the voluntarism of Wilhelm Wundt and ended up with theological revelations.

Speculative psychology was not a monolith: debates reflected in the journals testify to the great variety of views among its representatives. Thus, Lev Lopatin, Ernest Radlov, Nikolai Grot, Sergei Trubetskoy and some other adherents of this trend openly opposed the opinions expressed by Vvedensky in his work *On the Limits and Signs of Animation*, published in 1892. Polemics were initiated on the pages of the journal *Voprosy filosofii i psikhologii* (Questions of Philosophy and Psychology) and continued for several years. However, these pillars of idealist psychology revealed an enviable unity as they fought against materialism, their common foe, no matter how much they differed on certain issues and how bitter their mutual accusations. Many of them began in their time by siding with materialism, which developed under the influence of flourishing Russian social thought in the 1860s and successes achieved by natural scientists in the country. Then they changed over to philosophical idealism, mysticism and obscurantism. This regress of philosophical thinking in Russia is clearly reflected in a collection by Sergei Bulgakov, *From Marxism to Idealism*, and in other writings of that period.

The works authored by the priests of the Russian Orthodox Church made up a specific section of metaphysical psy-

chology, in particular articles written by them for various clerical organs, such as, for example, the journal *Vera i razum* (Faith and Reason), which readily printed theoretical opuses "refuting" materialism. "Our ruling classes", Lenin noted in commenting on this journal, "very often are not ashamed to expose themselves *au naturel* in prison, church, and similar special publications. It is high time we revolutionaries systematically utilised this 'rich treasure-house' of political enlightenment."[1] The ministers of the Church promptly reacted to the newest trends in natural sciences, advances made in geology, astronomy, anthropology, physiology and experimental psychology. They were seriously disturbed by breakthroughs made by physiologists, psychologists and Darwinists, who tried to explain the psychical activity of animals from scientific positions.

Psychologists who occupied idealist positions were not only to be met at University chairs and in theological Academies where they were professors. One such idealist was the famous physician and psychopathologist A. A. Krogius, who wrote many interesting works on the psychology of the blind. He took a reactionary position on theoretical issues of psychology and whenever the opportunity arose, tried to "refute" materialism in an effort to preserve "pure psychology" from the penetration of experimental research methods. At the Second Congress on Pedagogical Psychology, in arguing with Lange he declared: "Experiment has no right to, must not approach the deep and important in the soul. And even if it made an attempt to do so, it would prove to be powerless, for here it is not a matter of experimentation, but of comprehension of spiritual life, of spiritual revelation."[2]

Machists, empirio-critics and empirio-monists objectively adhered to the right wing of psychology. Avoiding psychological issues proper, they still came out with works which

[1] V. I. Lenin, "Review of Home Affairs", *Collected Works*, Vol. 5, 1973, p. 294.

[2] *Transactions of the Second All-Russia Congress on Pedagogical Psychology*, St. Petersburg, 1910, p. 74 (in Russian).

were a kind of philosophical introduction to psychology. Such was, for example, a long article by Alexander Bogdanov, "Psychical Selection",[1] and several sections in his *Empirio-Monism*.[2] Declaring war on the dualist parallelism of the "physical" and "psychical", following his teachers Ernst Mach and Richard Avenarius, he tried to attain "monism" by regarding the "physical" and "psychical" as elements of a single experiment, only organised in a different manner. However, Bogdanov interprets experiment idealistically, that is, in the final analysis, dualism cedes its place to subjectivist idealism. Lenin ridiculed Bogdanov's efforts to mask the idealist essence of his views on the relationship between the physical and the psychical: "Every man knows, and science investigates, ideas, mind, will, the psychical, as a function of the normally operating human brain. To divorce this function from matter organised in a definite way, to convert this function into a universal, general abstraction, to 'substitute' this abstraction for the whole of physical nature, this is the raving of philosophical idealism and a mockery of science."[3]

The concepts of Machists and empirio-critics in the sphere of psychology were speculative in character, and though they sometimes made excursus into natural sciences and even bowed to Marxism, they little differed from all sorts of "Introductions" written by metaphysical psychologists. Concerning the empirio-monism of the same Bogdanov, Lenin noted: "What a pity that this magnificent philosophy has not yet found acceptance in our theological seminaries! There, its merits would have been fully appreciated."[4]

Speculative psychology was objectively opposed by a special trend in psychological thought, which can be as a whole

[1] A. A. Bogdanov, "Psychical Selection (Empirio-Monism in the Theory of the Psyche)", *Voprosy filosofii i psikhologii*, 1904, Book III (73).

[2] A. A. Bogdanov, *Empirio-Monism*, St. Petersburg, 1904-06, Books 1 and 2 (in Russian).

[3] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, p. 229.

[4] *Ibid.*, p. 228.

characterised as natural-scientific, though not without certain reservations which we will later explain, and despite the actual heterogeneity of doctrines making it up. This trend found its expression in the works by Vladimir Bekhterev, Vladimir Wagner, Pyotr Lesgaft, Alexander Lazursky, Nikolai Lange and others. Even the best of these works could not have lifted psychology out of the methodological crisis, yet they created prerequisites for its development on the basis of dialectical materialism, which became dominant in the science of psychology after the October Revolution. The natural-scientific trend in the development of psychology, which met with open hostility on the part of official philosophy and psychology, is characterised by the following features.

Among its characteristics the most important is its vital link with progressive Russian natural science.

Natural scientists interpreted the external world in materialist terms. As applied to problems of psychology, this natural-scientific materialism established favourable conditions for struggling against idealist conceptions and accumulating authentic knowledge concerning the nature of mental life. Psychology essentially became part of natural science and its most important branches—physiology, medicine, zoology and evolutionary theory.

The natural-scientific trend in psychology was founded by Sechenov, whom Timiryazev called "one of the most profound researchers in the sphere of scientific psychology", and who did not stop short "before its most complicated problems" and tackled them with the "carefulness of a scientist while adhering to principle as a thinker".[1] From 1863, Sechenov consistently and systematically formulated in his works a materialist view of mental activity. Opposing metaphysical idealist psychology with its typical "isolation of the psychical", he mapped out a natural-scientific path for the study of psychic phenomena. One cannot but share Rubinstein's

[1] K. A. Timiryazev, *Works*, Vol. VIII, Moscow, 1939, pp. 164-65 (in Russian).

opinion that "Sechenov's reflex theory of mental activity was the central axis around which all ideological struggle has been waged—between materialism and idealism—over the entire course of history of Russian psychology from the moment Sechenov came out and up to the eve of the October Revolution".[1] Sechenov's principles of materialist psychology became a powerful weapon in the hands of progressively-minded scholars, despite the fact that they were buried in silence or derided by the official idealistic science. Sechenov was shifted from the leading posts he had occupied, and so he could not teach young people in the spirit of his ideas. Still, a number of scientists, who were not his disciples, began to implement his ideas even prior to the revolution.

The first among them was the great Russian scholar Ivan Pavlov, who repeatedly emphasised the link between his research work and Sechenov's ideas. In 1913, in his speech on the occasion of the half of a century anniversary of the publication of Sechenov's book *Reflexes of the Brain*, Pavlov stated: "Half a century has passed since the Russian scientific work 'Reflexes of the Brain' was written (in 1863; published a year later), which contains, expressed in a clear, precise and captivating form, the main idea of that which at present we are elaborating."[2]

Even the most advanced Russian psychologists failed to correctly appreciate from the very beginning the importance of Pavlov's doctrine for the future of psychology. Moreover, reactionary forces used all kind of ploys to vehemently oppose it in most variegated forms. They tried to ignore it altogether as a purely physiological theory, thus being irrelevant for psychology, and attempted to depict it as the realisation of the neo-Kantian principle of the impossibility to prove another person's being animate, or asserted without any ground that

[1] S. L. Rubinstein, *The Principles and Ways of Development of Psychology*, Moscow, 1959, p. 240 (in Russian).

[2] I. P. Pavlov, "The Twenty Years Experience...", *Complete Works*, Moscow-Leningrad, 1951, Vol. III, Book I, p. 158 (in Russian).

Pavlov identified the animals' psyche with human consciousness. It was not so simple to find one's bearings in this quagmire and to separate the essence of Pavlov's outstanding discovery from speculative outgrowths which multiplied thanks to the efforts of some philosopher followers of the great physiologist and of his "detached" interpreters (Vvedensky and the like). Speaking of the widely spread idealist view of certain results obtained by physiology at that time, Lenin remarked concerning Feuerbach's criticism of Johannes Müller's "physiological idealism": "The 'connection' between physiology and philosophical idealism, chiefly of the Kantian kind, was for a long time after that exploited by reactionary philosophy."[1]

It would be, however, a great mistake to say that Pavlov's doctrine did not influence the development of psychology. For instance, his method of conditioned reflexes was extensively applied in researches conducted by Bekhterev and his associates (Bekhterev called them combinative reflexes).

Pavlov's ideas were also developed by Lesgaft, who wrote in his article "On Reflex Phenomena", that the existence of a simple reflex process, a simple transmission along certain routes, via nerve conductors and nerve nests, as well as a complicated reflex process, in which the complex associative process became an ordinary, reflected, reflex process as a result of repeated simultaneous coincidence of irritants, has long been an open secret.

The general theoretical significance of Pavlov's works was first realised by Lange. He came to the conclusion that Pavlov overcame Descartes' mechanical outline of the reflex and that, after Pavlov's experiments, "the former simplified notion of the reflex as a process fully independent of the psyche proved to be essentially dogmatic and insufficient". As he characterised the actual role of the psyche in the life of an organism, Lange pointed out that among the chief functions

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[1] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, p. 304.

of the psyche is to foresee events in the organism's surroundings on the basis of its past experience. Boris Teplov regarded this position as an elaboration of Pavlov's ideas. Actually, Lange referred to Pavlov in his book.

There are also other facts indicating the impact Pavlov's works exerted upon the evolution of psychology. As far back as 1905, speaking at the First Congress on Pedagogical Psychology, P. D. Yenko, a surdopedagogue from St. Petersburg, suggested that the terms Prof. Pavlov coined for describing objective studies in the functional physiology of the central nervous system should be used in explaining at schools the results of objective studies in the sphere of psychic phenomena. Regrettably, Yenko was inclined to make vulgar conclusions from Pavlov's doctrine as he rejected psychology.

In 1903, in his debate with the subjectivist Nikolai Kravkov in the Russian Society of Physicians, Pavlov came out for the objective method and opposed expediency interpreted as "an organism's balance with the environment" to the teleological expediency of the subjectivists. Pavlov was supported by Yenko, who saw a confirmation of these views in pedagogics, V. Yu. Yavein, who cited clinical data, and Ivan Tarkhanov, who emphasised the link between Pavlov's experiments and Sechenov's ideas and the necessity of elucidating the role of the cerebral cortex in the formation of conditioned reflexes.

Pavlov participated in numerous debates in an effort to propagate his ideas concerning reflexes, thus sowing confusion in the ranks of supporters of philosophical idealism in psychology. In particular, he took part in the discussion held at the St. Petersburg Philosophical Society in 1916, where his opponents were Lossky, Vvedensky, Krogius and others. As a result of the debate, the idealist Lossky, who adhered to metaphysical positions, recognised that he "is confused", while Vvedensky tried in vain to push Pavlov towards Kantianism, asserting that psychical data cannot be proved and are only perceived through personal experience, which, he stated, followed from Pavlov's experiments.

Speaking at the Third Congress on Experimental Pedagogy held in 1916, Lazursky stated that the contribution of Pavlov and his school made to the development of modern psychology was greater than any other. His physiological conceptions, Lazursky pointed out, disclosed the reverse side of the processes which psychologists called associations. In his opinion, Pavlov came close to understanding the mechanisms of the volitional process. As they study activity, physiologists come still closer to psychology, since activity is one of the main problems investigated by psychology. Thus, Lazursky concluded, physiology and psychology must go hand in hand.

An interesting attempt to apply Pavlov's doctrine in the substantiation, in terms of physiology, of the problem of emotions, was made by Nikolai Kabanov. Many other works of Russian psychologists also contain references to Pavlov's ideas.

Thus, as we have seen, Sechenov and Pavlov were at the very source of the natural-scientific trend of Russian psychology. Their activity had an extraordinary influence upon the evolution of psychological theory in Russia, and in particular on the development of those departments of psychology which come close to the domain of natural sciences.

It should be pointed out that the natural-scientific foundation of psychology was strengthened not only by contributions made by physiologists Pavlov, Sechenov, Vvedensky and Tarkhanov; many other Russian natural scientists who seemed to be far from psychological problems proper—Kliment Timiryazev, Dmitry Mendeleyev, Ilya Mechnikov and Alexander Stoletov also did much for that, as they defended the materialist basis of natural science against physical idealism, vitalism and various forms of theology, sometimes carefully masked. Suffice it to recall Mendeleyev's exposure of spiritism in his research and public reports, and Timiryazev's struggle against the penetration of metaphysics into science.

Natural-scientific materialism accounts for the one-sidedness of the psychological schools which composed the natural-scientific trend. Its representatives did spread materialist

views only to natural phenomena, and not to social phenomena. As a result, they regarded psychology as an exclusively natural science. The social determination of personality was ignored or interpreted in a very erroneous way. Thus, problems involved in the study of characters, motivation of human activity, emotions and many others could not be resolved.

Illustrative in this respect is the dual role played by the prominent Russian psychologist Lazursky, an associate of Bekhterev and a physician by profession. At the beginning of the 20th century, he supported the natural-scientific trend in psychology. He firmly opposed the view that psychology owed its achievements to philosophy (he had in mind idealist philosophy), with which it had long-term ties: "We think," he wrote, "on the contrary, that if psychology, despite all the difficulties, has attained a noticeable degree of development, it primarily owes it to natural science. We shall say even more: almost every time we notice a rapid advance of one of the branches of psychology, we may positively state that the impetus to that development has been made by progress in a particular sphere of natural science, no matter whether that advance consists in the discovery of new facts, elaboration of new methods, or the formulation of a new talented theory." In his well-known work, *General and Experimental Psychology,* Lazursky stressed that psychology should not be a philosophical or physiological (in the spirit of Wundt), but a "biological science". In this respect, Lazursky's views have much in common with Lange's "real psychology" and Wagner's "biopsychology".

Yet Lazursky's theory of personality and character is permeated with mechanism and testifies to his lack of understanding of man's social essence. In distinguishing between endopsyche (i.e. the main nervous and psychical organisation) and exopsyche (i.e. the psyche taken in its relationship with the environment) in each human individual, he mechanically opposed one to the other, since he failed to perceive the individual as a dialectical unity of the inherited and the acquired, the biological and the social. Thus the classifi-

cation of personalities and the principles for compiling psychological characteristics he proposed, relied on erroneous foundations and led to wrong conclusions.

The principled stand of other representatives of natural-scientific psychology, for instance of Bekhterev and Lange, is not devoid of such duality either. Still, the prevalent trait of the natural-scientific trend is its principled opposition to the extreme propositions of subjectivist, introspective psychology, anthropomorphism and open manifestations of idealism and metaphysics in science. Bekhterev's critical remarks against the subjectivism of idealist psychology, Wagner's statements against metaphysics, anthropomorphism and "monism from above", and Lange's declarations against the theory of psychophysical parallelism and introspectionism are an integral part of their theoretical works.

The social views of representatives of the natural-scientific trend in psychology are noted for their profound democratism. Suffice it to recall Bekhterev's speech on the freedom of human personality, Lange's defence of women's education and, last but not least, the fact that Bekhterev, Wagner, Lange, as well as Pavlov, Timiryazev and other progressively-minded scholars, actively cooperated with the Soviet government after the October Revolution. Their views were very close to those of Russian revolutionary democrats—Belinsky, Herzen, Dobrolyubov, Chernyshevsky, and Pisarev. They were deeply sympathetic with the oppressed people and were firmly opposed to autocracy—and these traits served to draw a sharp line between these fine scholars and representatives of the officially-recognised idealist psychology.

The empirical trend mentioned earlier occupied a middle position between the natural-scientific and the contemplative philosophical trends. While inclined to idealist constructs of psychology, in particular to neo-Kantianism and positivsim in the philosophical substantiation of psychological problems, it at the same time applied experimental methods in studying the psyche, which it borrowed from natural sciences. The most prominent psychologists of this trend are A. P. Ne-

chayev, Grigory Rossolimo, Ivan Sikorsky, V. F. Chizh. Georgi Chelpanov, who demonstrated an original blend of empirical psychologist and a metaphysical psychologist, occupies a place all his own.

Supporters of the empirical trend refused on principle to recognise general laws governing the psyche and consciousness, or consider relationships that existed between the psyche, the environment and the brain. Most of the psychologists belonging to this trend rejected the possibility and necessity of philosophically interpreting the facts they established empirically in their scientific research. Chizh, an outstanding representative of this trend, declared in his *On Methods of Scientific Psychology:* "I understand psychology as a branch of knowledge whose purpose is . . . to define the object by way of measuring it and describing it as simply and precisely as possible: I wouldn't touch upon the philosophy of psychology, since that is indeed an object of philosophers' research."

Such a position made it possible for those who adhered to it, on the one hand, to avoid clashes with the dominant idealist ideology, maintaining neutrality with respect to it, and on the other, to create the illusion of a purely scientific and objective research.

Refusal of empirical psychologists to wage struggle against spiritualistic views on mental life and their effort to take a position above the battle between materialism and idealism resulted in devastating criticism levelled at them both from the left, in particular from representatives of the natural-scientific trend, and from the right, from the camp of philosophical idealism. An example of such criticism from the right is an attack launched by Semyon Frank, who made a laughing-stock of the groundless claims of neo-Kantians, positivists and other apologists of empirical psychology to being free of general philosophical principles, "of all metaphysics", as he tried to reinstate spiritualistic psychology in its position as a generally accepted teaching on the nature of mental life and on the relation of this to other spheres of existence. Despite the fact that he criticised empiricists from the right and in

support of a still more reactionary psychological system, it testifies that the weakness of the methodological positions of empirical psychology was already recognised before the October Revolution.

Frank is known to refer to Blaise Pascal in stating that "contempt of philosophy is a philosophy in its own right". By analogy, even rejection of the soul's existence or of its cognisability is in fact a special philosophical doctrine concerning the soul, since it undoubtedly goes beyond the competence of empirical psychology as a natural science of the laws of mental phenomena. Frank said that "philosophical psychology" had always existed and cannot disappear. In his *The Human Soul* he wrote: "It is disseminated, for example, in the introductory and conclusive considerations formulated in textbooks and research on 'empirical psychology', in discourses 'about the goals and methods of psychology' (often naively imagining that the goals and methods of science may be discussed without a generalised, philosophical knowledge of its subject-matter). It is further spread in all kind of 'Introductions to Psychology' and mediations on psychology's general issues (suffice it to recall writings on 'psychophysical parallelism') and, last but not least, in general philosophical and gnoseological works." These remarks indeed are to the point in respect to empirical psychology, though their author himself adhered to a profoundly erroneous and extremely reactionary position in interpreting the subject-matter of psychology.

Typical of empirical psychology is the use of experimental methods in the investigation of mental phenomena as opposed to contemplation intrinsic in methaphysical psychology. Experiment was borrowed by psychology from natural sciences, and its introduction at the end of the 19th century met with desperate resistance on the part of idealist psychologists. However, already during the first decade of the 20th century, many of them were forced to reconcile themselves with the use of laboratory equipment in studying mental life, even though they did it half-heartedly. Thus Vvedensky, who re-

garded psychological experiments as an empty pastime unworthy of a real scholar, concluded his *Psychology Without Any Metaphysics* with a description of the equipment and its use.

Since they could not "destroy" or "abolish" experimental psychology, idealist psychologists staged attempts at "taming" it. Illustrative in this respect is the activity of Chelpanov, whose own psychological system amounted to idealism within experimental psychology. Himself a prominent representative of experimental psychology and director of an institute in which experimental methods of psychological research were cultivated, he spared no effort to make experimental psychology dependent on metaphysical philosophical systems. The fate of psychology as a discipline taught at gymnasia was determined at the First Congress on Pedagogical Psychology (1906) as a result of the speech made by Chelpanov, who firmly opposed introduction of experiment into the gymnasium curriculum. He argued that "without the metaphysical element, psychology will be deprived of half its charm for the pupils". His view prevailed despite opposition voiced by A. P. Nechayev and Vladimir Ivanovsky. As was noted in a report at the Congress, "Acquiring of equipment for demonstrations was recognised as desirable, though not obligatory, for all gymnasia and in fact premature." This formulation, very typical of the official quarters' attitude towards experimental psychology, was epitomised by Chelpanov. As aptly put by Timiryazev, their ideal was to turn psychology into "experimental metaphysics". Thus we can see that the use of experiment did not in itself testify to the progressiveness or uniformity of empirical psychology characterised by the lack of homogeneity at that time.

Indeed, experiment is but a weapon in the hands of the researcher, so that the thrust of its action, the goals pursued in its use and the conclusions arrived at are in the final account determined by the stand taken by the researcher in the ideological struggle taking place in the corresponding epoch. Under definite conditions experiment is a progressive and

effective method of psychological research, but it may well lose these features if used in the interests opposite to the general tasks of developing scientific thinking. This is why identification of experimental psychology as a special school in psychological science would be quite conventional. One would rather point out that there were several trends of experimental psychology in Russia at that stage, each of these characterised by its own goals and content, its own view of general philosophical problems and its own place and future in the history of psychology.

Many of the representatives of empirical psychology sought to turn psychology into a vitally important scientific discipline, by rendering it the character of an applied science. In conformity with the set goals, individual branches of applied psychology developed, first of all pedagogical and child psychology (Nechayev, Rumyantsev, Kapterev, Povarnin, Sikorsky), as well as pathopsychology and defectology (Chizh, Sukhanov, Rossolimo), social psychology (Yevgeny Roberti, Lev Petrazhitsky), psychology of creative activity (Dmitry Ovsyaniko-Kulikovsky).

Psychology's turn to practical needs reflects demands made by developing capitalist society on science in general and psychology in particular. The bourgeoisie could not be satisfied with reminiscences of natural philosophy and mystical revelations in the spirit of Vladimir Solovyov and Nikolai Berdayev, so much liked by metaphysical psychologists. They put in the forefront the goals of professional selection, individual instruction, psychological substantiation of legal norms and principles of holding an investigation. It could hardly be regarded as a chance occurrence that the largest psychological institutions in Russia were based upon donations from the Russian commercial bourgeoisie (the Moscow Psychological Institute, for example, was based upon the donations of the merchant Shchukin, and the Petersburg Psychoneurological Institute, upon the funds donated by the Alafuzovs and Zimin). The bourgeoisie primarily had in mind the prospects of developing applied aspects of empirical psychology. At the

same time, representatives of speculative psychology, who reflected the position of the most reactionary monarchist circles, slighted the works of Nechayev and his supporters for their practical thrust and applied character. Thus, Vvedensky, Chairman of the Petersburg Philosophical Society, who was their mouthpiece, declared that experimental psychology's contribution to theory and even practice (especially as concerns pedagogics) was of no consequence whatsoever. Experimenter psychologist Chelpanov and physician psychologist Krogius, who would gladly undermine empirical psychology from within, held the same view.

However, psychologists who tended towards the natural-scientific trend, for example, Rossolimo, constituted a real force within the framework of that same bourgeois empirical psychology. The struggle around the aims of psychology reflected, in its own way, the struggle waged between classes and class groups during the epoch preceding the bourgeois revolution which took place in February 1917.

It would be a mistake to identify the conflict between the left and right wings in empirical psychology with the struggle between materialism and idealism in psychology. Yet an echo of this struggle can be heard in the polemics between various trends of empirical psychology. In his articles dealing with congresses on psychology, Mikhail Sokolov[1] vividly describes curious turns in these debates and, as he analyses the debate between Nechayev and Chelpanov, he warns, on the one hand, against simplifying it (here it is "not the struggle between idealism and materialism, but between two varieties of idealism") and, on the other, he shows that the practical thrust of Nechayev's position was more in harmony with the scientific requirements of that time than the abstract nature of Chelpanov's psychological conception. This explains

[1] M. V. Sokolov, "Questions of Psychological Theory at Congresses on Pedagogical Psychology", *Voprosy psikhologii*, No. 2, 1956; "Criticism of the Method of Tests at Congresses on Experimental Pedagogics", *Voprosy psikhologii*, No. 6, 1956.

why such serious scholars as Lange, Bekhterev and Lazursky had more in common with Nechayev than Chelpanov. "Under these circumstances society's compassion can easily be drawn to those aspects of Nechayev's psychology which embraced certain progressive tendencies and allowed their interpretation in a materialist sense."[1]

As we refer to a particular psychologist as belonging to one of the three trends mentioned, we do not regard this bracketing as final. We only stress the tendencies which were predominantly reflected in their activities. We must always bear in mind, however, the duality of the fundamental principles adhered to by many of these psychologists. Thus, supporters of natural-scientific psychology Bekhterev, Lange and Lazursky have much in common with empiric psychologists. One of the most prominent figures in empirical psychology, Chelpanov tried to remain a metaphysical philosopher within the framework of experimental science. Another representative of the same empirical trend, Rossolimo, was clearly inclined towards objective psychological research and employed methods which were in principle identical to those applied in natural science. The outstanding metaphysical psychologist, Vvedensky, essentially substantiated the theoretical platform of empirical psychology—i.e., psychology "without any metaphysics". The borders between the trends were rather vague; neither should we ignore the duality of the positions occupied by scholars, a direct result of the crisis of psychological doctrines in the pre-revolutionary period.

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[1] M. V. Sokolov, "Questions of Psychological Theory at Congresses on Pedagogical Psychology", *Voprosy psikhologii*, No. 2, 1956, p. 21.

Chapter Two

THE MAIN TRENDS IN PRE-REVOLUTIONARY PSYCHOLOGY

Speculative philosophical psychology dominated Russia's educational establishments. It had at its disposal the journal *Voprosy filosophii i psikhologii* (Questions of Philosophy and Psychology) and other publications for spreading its ideas, and could prepare its own cadres. To reveal the role played by this trend in psychology, we shall consider the views of its most typical representatives—Lev Lopatin, Alexander Vvedensky and Semyon Frank.

Lev Lopatin, Professor of Moscow University, was at the same time Chairman of the Moscow Psychological Society and editor of the *Questions of Philosophy and Psychology.* Reactionary psychologists regarded him as the "father" of Russian psychology. This is testified to, for example, by the collection issued in his honour on the occasion of the thirty-year anniversary of his scientific activity (1911). Many years later, long after his death, Vassily Zenkovsky, a White emigré, called Lopatin the most prominent Russian psychologist. Lopatin can, indeed, be called "prominent", however, not as a psychologist but as an obscurantist, "our notorious reactionary philosopher", as Lenin called him.[1]

In his philosophical views, Lopatin (as well as S. A. Askoldov, Lossky) was an epigone of Gottfried von Leibnitz and saw the world as a unitary organism, with God as the absolute, as its single centre. Lopatin asserted that the soul

[1] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, p. 299.

was a substance. He held that it could not be destroyed, since the substance is eternal, and only the temporal can be destroyed. These assertions clearly coincide with the religious dogma concerning the soul's immortality.

Lopatin used these fideistic ideas as the basis for his psychological system, which is fully exposed in his *Kurs psikhologii* (A Course of Psychology). Lopatin declared that the "spiritualistic hypothesis" was the only one that had the right of existence in psychology. Trying to obstruct materialism's penetration of the sphere of psychology, he assumed a dualistic view of mental life which allegedly eliminated "fatal" contradictions and overcame "the weak points in psychological explanations ... which are indivisible from the monist constructs". But his dualism concerning psychology did not interfere with his remaining a monistic idealist in philosophy. Like Gottfried Leibnitz, Rudolf Lotze and Johann Herbart, he thought that one could be simultaneously a monist, metaphysician and dualist in one's view of man, thus once again confirming the idealist foundation of his dualist position. "To us Marxists," Lenin wrote, "the difference between Mr. Lopatin and Messrs. Willy, Petzoldt, Mach and Co. is no greater than the difference between the Protestant theologians and the Catholic theologians."[1]

The quintessence of his view of methods to be employed in psychology is contained in his assertion that people cognise the surroundings "only through the prism of their own spirit", which is an obstacle on the path to knowledge, since everything is cognised through psychical "symbols" or "signs". Lenin brilliantly exposed these agnostic views of Lopatin in his "Materialism and Empirio-Criticism".

His subjectivist proposition concerning the "prism" was sufficient ground for Lopatin to arrive at a conclusion which "substantiated" the introspective nature of his psychology: "We perceive everything via our psychic states, and this is why we should perceive these very states directly, since oth-

[1] V. I. Lenin, *Collected Works,* Vol. 14, p. 353.

erwise we could not perceive everything in them." It is clear that, besides the act of perceiving, Lopatin also recognises the existence of an Ego capable of direct perception. This Ego is the same supra-temporal spiritual substance, i.e., the immortal, eternal and unfathomable soul.[1]

Lopatin recognised self-observation as the chief method to be employed in psychology, but he also recognised that it was imperfect and limited, since we can only cognise our own consciousness by using it. He accepted as an irrefutable fact in psychology that individual consciousness is impenetrable for another consciousness. Hence his effort to add an objective method to the subjective method of pure self-observation. The objective method is not, in his opinion, as "authentic" and "scientific" as introspection, for it amounts to guesses and suppositions built by analogy with our introspective data. For example, Lopatin thought that the reason for insufficient elaboration of animal psychology was that we observe in the life of animals manifestations of such internal states for which we do not find analogies in ourselves.

This explains Lopatin's sceptical attitude towards experimental psychology which widely draws on objective methods. As he stressed that physiological psychology investigates the ties between the states of the soul and recognised the existence of a close connection between them, Lopatin asserted that psychology had never known the nature of that connection. Though he highly assessed the physiological data obtained by Heinrich Helmholtz and thought that the physiology of "external" emotions and the theory of localisation of

[1] Though it goes beyond the limits of a study in the history of psychology, I should like to say that in self-observation we immediately ('directly") perceive the objective world reflected in the "prism" rather than the "perceiving prism", and that the mental process cannot be perceived, either in another person (as Lopatin asserted), or in oneself. We can "directly" deal only with the content of our psyche, not with the mental process itself: no matter how "introspectively" we look "into" ourselves, we cannot see any other than the external world reflected in our brain.

mental phenomena were satisfactorily elaborated, he stated firmly that "the internal processes going on in our brain in conformity with the psychic states we are experiencing" are "an extremely dark, impenetrable and mysterious sphere". All the above proves that Lopatin intentionally ignored ideas which disclosed the essence of the link that exists between psychic and physiological states, intentionally "did not notice" the reflex theory which by that time had already been formulated in the generally-known works by Sechenov and which had been confirmed by experiments in the investigations conducted by Pavlov. Speculative idealist psychology did not bother itself with the latest advances in natural science and displayed blindness and ignorance in its estimation of prospects before the science of psychology. Lopatin did not see, nor did he wish to see, the breakthroughs in the physiology of the brain made in his time, and even "refuted" its "claims" by criticising the long-forgotten phrenology.

Lopatin also did not place great hopes on experimental psychology, seeing its chief purpose in experimentally verifying the law of Weber-Fechner ("verification of this law is the chief goal in experimental psychology"). He concludes his description of the aims and possibilities of experimental psychology with an apology for self-observation.

Lopatin's views amount to a complete system of idealist, introspective psychology, based on dualism and recognition of the substantive, material nature of the soul. The reactionary character of Lopatin's psychology, underlied by old German idealistic systems, its purely speculative nature, complete abstention from practical implementation of psychological knowledge, an open hostility towards natural science and the use of experimental methods in studying the psyche, are typical of the speculative trend in psychology.

Alexander Vvedensky, Professor of the St. Petersburg University and Chairman of the Petersburg Philosophical Society, developed another system of idealist psychology. The difference between Lopatin's and Vvedensky's systems was largely explained by their adherence to different philosophi-

cal idealistic schools. What united them was the struggle against the spread of materialism in Russia. Vvedensky's methods of struggle against materialism in psychology, though, were more subtle and sophisticated than Lopatin's open spiritualism and metaphysics.

Vvedensky dealt with psychology in only one of his large works—*Psychology Without Any Metaphysics,* which was first published in 1914 and became rather popular.

Vvedensky's psychological system relies on his firm belief that mental life is absolutely uncognisable in principle. He based himself on the Kantian theory of the transcendence of the notion of the soul to our consciousness and maintained that the notion of the soul can never turn into knowledge. Vvedensky thought that the subject-matter of psychology is that of belief rather than of science. Since transcendent objects (the soul being one of them) belong to the sphere of metaphysics, the doctrine of the essence of the psyche should be exempted from psychology as metaphysical. Excluding all arguments about the essence, content and forms of the psyche, as well as concerning its relationships with other objects, we shall have "psychology without any metaphysics", he said.

Thus Vvedensky tried to construct psychology from Kantian philosophical positions, leaving aside the issue of its essence and reducing it to descriptions of various mental phenomena. However, his denial of any general theories with respect to the subject-matter of psychology, when scrutinised at a close range, proves to be fictitious. In the same work he was forced to deal with a kind of metaphysical problem (in the opinion of a Kantian) as he provided his own judgement on the following psychophysical phenomenon: "For some reason, spiritual phenomena always arise parallel with certain processes of the brain."[1] Thus he announced as "methaphysical" only the monist theories of the psyche, considering the dualistic concept of parallelism to be "non-metaphysical".

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[1] A. I. Vvedensky, *Psychology Without Any Metaphysics,* Petersburg, 1917, p. 60 (in Russian).

In 1892, in his work entitled *On the Limits and Signs of Animation,* Vvedensky tried to prove that the spiritual life of another person has no objective manifestations, since only bodily changes can be observed, and not spiritual phenomena. This prompted him to come to the conclusion about the impossibility to prove the existence and cognise the mental life of another person. Some time later he formulated the "psychophysical law of Vvedensky": "Wherever spiritual life exists for certain (i.e., inside myself), it proceeds in such a manner that the bodily phenomena corresponding to it take place in accordance with their own material laws, as if there were no spiritual life there at all."

It is quite clear that the "psychophysical law of Vvedensky" is based on the principle of dualistically opposing the soul and the body, the spiritual and the bodily—i.e., on a certain "metaphysical" principle "without" which Vvedensky himself promised to do. This proves the law to be "metaphysical" even in the Kantian sense of the word, as well as in its contemporary meaning.

To confirm his dualistic conception, Vvedensky turned to natural scientists, trying to present them as like-minded scholars and to rely on their authority: "Two scientists . . . arrive at the same conclusion: any objectively (i.e. from the outside) perceived phenomenon in any animal can be explained by purely physiological reasons without any reference to the animation of this animal."[1] He named the two scientists: Jacob Uexküll, a German biologist belonging to the school of vitalism, who published his *Psychologie und Biologie in ihrer Stellung zur Tierseele,* and . . . Ivan Pavlov—meaning his article "Experimental Psychology and Psychopathology on Animals". It should be emphatically stated that the article contained nothing at all for Vvedensky to count Pavlov among his collaborators. Indeed, Vvedensky's chief thesis in his *Psychology Without Any Metaphysics* was recognition of man's mental life as epiphenomenal with respect to physiological processes

[1] A. I. Vvedensky, *Psychology Without Any Metaphysics,* p. 78.

taking place in the brain. For Vvedensky, "any animal" also includes man. The thrust of Pavlov's article was quite different: he maintained that psychic phenomena (the so-called psychic salivation) in dogs can be studied objectively, without drawing any analogies with the mental life of man. The psychic phenomena themselves were interpreted by Pavlov not as manifestations of the soul, but as "complicated nervous" phenomena. Neither this particular article nor any other work written by Pavlov could be consonant with Vvedensky's reactionary ideas.

However, Vvedensky also named G. P. Zelyony, Pavlov's associate, together with Uexküll and Pavlov himself, and for good reason. In his report at a meeting of the Petersburg Philosophical Society in 1909, Zelyony made an attempt to apply Vvedensky's point of view to sociology, since he sided with Kantianism at that time. Zelyony relied on the principle of "empirical psychophysical parallelism" (see below) as a dualist, asserting: "Hence we have two rows of phenomena, one of them physiological, and the other, psychic."[1] And he continues, quite in the spirit of Vvedensky: "There is nothing metaphysical here. If we tackle the question, whether the psychic and the physical are two different substances or whether they are only two different sides of one and the same process unknown to us, then we enter the sphere of metaphysics."[2]

It was not only Zelyony, but also other physiologists who adopted and propagated neo-Kantian ideas in the pre-revolutionary years. Leon Orbeli, for instance, directly referred to Vvedensky's work, *On the Limits and Signs of Animation,* and repeated his arguments to the effect that in the immanent world we deal only with our spiritual (internal) processes, while the mental life of any other being, even of any other man, is transcendental. These agnostic ideas were applied

[1] G. P. Zelyony, "A Dog's Orientation in Sounds", *Transactions of the Society of Russian Physicians,* St. Petersburg, 1906, Vol. 73, p. 340 (in Russian).

[2] *Ibid.*

in interpreting animals' psyche: "As a transcendental object, the issue of the existence of mental life in animals cannot be the subject of science, since its sphere is limited by the immanent world. All attempts at scientifically resolving the issues of the existence of the soul in animals and of the conscious nature of responses which are called instinctive, etc. will always prove to be just fruitless attempts. The issue of animation cannot be resolved through pure knowledge, it is an object of faith."[1]

Subsequently, Orbeli, an outstanding Soviet physiologist, firmly renounced idealism.

Vvedensky's neo-Kantian conceptions, like similar conceptions of his ilk, met with opposition even at that time from representatives of the natural-scientific trend in psychology. Thus, the agnostic ideas contained in Orbeli's Doctor's thesis were criticised by Pyotr Lesgaft who examined it in detail in his article, "On Reflex Phenomena" (1909). He was particularly strongly opposed to the "Metaphysical Introduction", in which Orbeli cited excerpts from Vvedensky's lecture on psychology and concluded that "even where mental life does exist, the accompanying bodily (physiological) processes proceed according to their own laws, as if there were no mental life", repeating, almost word for word, the favourite formula of Vvedensky. "Posing the question this way," Lesgaft wrote, "we must reject the whole of psychiatry and even the whole of medicine, as well as pedagogy, and not recognise any scientific value in all these disciplines." Lesgaft expressed his categorical protest against these conclusions, referring to experimental data obtained in studies of the psyche of animals and people, and to achievements in physiology, anatomy, general biology and psychology.

Vvedensky's metaphysical constructs were also repeatedly taken to task by Wagner. In his article, "On the Tasks of

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[1] L. A. Orbeli, *Conditioned Reflexes from the Eyes in Dogs*, The Thesis Presented for a Degree of Doctor of Medicine, St. Petersburg, 1908, pp. 12-13 (in Russian).

Contemporary Philosophy", Vvedensky formulated a thesis concerning the existence of two kinds of creativity and two kinds of hypotheses: "mechanical" and "organic". "For the first kind, the point of reference and support is mechanical necessity, strict regularity which links by an iron law the phenomena of what is close and visible reality; for the second kind, the point of reference is requirements and postulates of our ideal self-knowledge, our internal freedom, which the thinker projects outside himself and presupposes in the basis of the world and the world process."[1]

Wagner makes a number of critical comments on these ideas of Vvedensky: "First, ... the constructs whose point of reference is 'requirements and postulates of our ideal self-knowledge, our internal freedom, which the thinker projects outside himself' are absolutely non-scientific. Second, as to whether constructs can be of any consequence altogether," Wagner thought that it was "not truth that could be obtained by boldly flying higher than clouds, but only a nonsense of metaphysical vintage, and it is precisely here that the difference between creativity in science and metaphysics lies." Wagner also reminds those who have forgotten it that "all the hypotheses that were advanced by the exceptionally bold thought of Schelling which in its time amazed all as it shot high above the clouds, became but a heap of rubbish in about 20 years." It should only be added that Vvedensky's metaphysical ideas met an even worse fate, since they went to the rubbish heap of history much more quickly.

While differing from Lopatin in his Kantian approach to the object of psychology, Vvedensky shared Lopatin's estimate of psychological methods and his attitude to experimental psychology. These issues were of great consequence, for they determined the scientist's position in the ideological struggle waged in Russian psychology at that time.

Like Lopatin, Vvedensky declared that self-observation is

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[1] A. I. Vvedensky, "On the Tasks of Contemporary Philosophy", *Voprosy filosofii i psikhologii*, Book 5, 1893, p. 136.

"inevitable", that it was the "chief" and "principal method", and that mental phenomena were only realised and perceived by the person in whom they occur. Vvedensky went even farther by doubting the expediency of parallel objective observation. He insistently advised a turn to data on self-observation contained in religious-ethical literature. In the wake of his teacher, Mikhail Vladislavlev, Vvedensky expressed his regret that the writings of ascetics and hermits (Isaac and Yefrem Siryan, Savva Dorofei, John Climacus) were not in wide use, though they provided models of self-observation as they were immersed in themselves and carefully studied the minutest curves of their heart and their desires, the sources and roots of sinful inclinations and thoughts.

Referring to the authority of William James, Wilhelm Wundt and Hugo Münsterberg, Vvedensky tried to prove that experimental psychology was not really important, emphasising that the techniques of psychological experimenting should not be confused with psychology. He wrote with apparent irritation: "The public at large as a rule just looks blank at anybody who is engaged in any psychological experiments, and in particular at those who can demonstrate psychological apparatus. Thus a vast number of people pass themselves off as psychologists only because they are always busy with various experiments, while they have no better notion of psychology than the man in the street. Such people are often to be met among the rapturous admirers of experimental psychology."[1]

By the way, it should be recognised that there existed some trends in Russian psychology at that time which gave grounds for this kind of reproaches, for example, the "experimentation" by Nechayev. Still Vvedensky conducted his criticism of contemporary psychology from the right, from positions of "pure" idealist philosophical psychology, and this can be demonstrated by the arguments with which he tried to prove

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[1] A. I. Vvedensky, *Psychology Without Any Metaphysics*, p. 42.

the fundamental unsoundness of experimentation in dealing with psychology's most serious problems.

From Vvedensky's point of view, experiments which were so very fruitful in other sciences, in particular in natural science, did not, and could not do anything useful in psychology. The advantages of experiment over observation, which proved to be decisive for other sciences, are just useless, he asserted, when applied in psychology, because "mental phenomena are always, before any experimenting, known to the person who experiences them"[1] Thus, according to Vvedensky, the nature of mental life itself accounted for the fact that experimental psychology is only accorded a secondary place in the science, and is only occasionally employed for certain services. Of course, the criticism had its strong points but, meted out from the position of introspectionism, it put brakes on the development of psychology's progressive elements.

There were also other philosophers who shared Vvedensky's neo-Kantian views, for example, Lapshin, prominent in his study of psychology of creative activity. His book, *The Problem of an Alien Ego in Contemporary Philosophy* (1910), is written in the spirit of Kantianism. Lapshin linked Kant's theory with ideas of psychological integrity. "How can one judge another individual's mental state?" asks Lapshin and answers: "If one remembers that it is impossible to prove the transcendental reality of another Ego, it can certainly be judged as immanent activity." In the physical world, a "blank spot" (i.e., every thing which is outside one's field of vision) is filled with our notions of the internal order. In the psychic world this "blank spot" (that which cannot be perceived in the mental state of another person) is filled by means of suppositions ("it seems that. . ."). Thus, in full accord with the ideas propagated by his teacher, Lapshin regarded the alien Ego as some "hypothetical construction". Indeed, Vvedensky

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[1] *Ibid.*, p. 50.

wrote that as concerns transcendental objects, "one may stick to any point of view", choosing that "which is easier to perceive and simpler".

On the eve of the October Revolution, the last attempt at defending and restoring speculative psychology was made by Semyon Frank. In his book, *The Human Soul. An Attempt at Its Introduction into Philosophical Psychology*, he openly declares himself in favour of restoring psychology as a science of the soul "in the old literal and precise meaning of the word". He regretted that at the present time philosophical literature on the nature of the soul was not available. It was a "real desert" since Schelling and Maine de Biran, he lamented. Spiritualist psychology, in his opinion, was equally far removed both from physiology and from the science of mental phenomena (from empirical psychology): "We wish to cognise not manifestations of the soul's life in the outer objective world, not its sensual-bodily shell, but the kernel itself, the very essence of mental life as such." The only science that deserves to be called psychology is, as Frank maintains, philosophical psychology as a doctrine of the nature of mental life and its relation to other spheres of existence. Philosophical psychology as Frank saw it was a return to the scholasticism of the Middle Ages and mysticism. Back to Plato, Plotinus, Stoics and the "profound Kabbala doctrine"—this is the leitmotif of Frank's psychological efforts. "Philosophy of the soul, i.e. the only kind of psychology which deserves to be called by that name, has always, and for a long time now, been nourished by religious intuition," he wrote.[1]

Frank's book, which actually marked the turn of the right wing in psychology to open spiritualism, without any reservations or flirtations with natural science, was hailed by idealist philosophers.

In 1917, the October Revolution put a stop to the "profound" efforts of metaphysical philosophers and spiritualists in

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[1] S. L. Frank, "*The Human Soul. An Attempt at Its Introduction into Philosophical Psychology*, Moscow, 1917, pp. 5-10 (in Russian).

the sphere of psychology. Several years later, already as émigrés living far from Russia, some of them, and in particular Frank, resumed their speculative constructions.

It is rather difficult to characterise varieties of empirical psychology and its individual representatives because of their great number, an exceptionally motley pattern of their psychological views and eclectic nature of their methodological positions. Chelpanov, Nechayev, Rossolimo, Chizh, Sikorsky, Kapterev, Krogius, Povarnin and many others can all be included within this trend. We shall examine here only the activities of Chelpanov, Nechayev and Rossolimo, the most prominent among them.

Georgi Chelpanov can be mentioned as belonging to the camp of empirical psychology only with serious reservations, since he never reduced his activity to empirical psychology alone and sided with speculative psychology in the ideological polemics taking place at that time. It is from this position that his theoretical works, *The Brain and the Soul*, the University course of psychology, and articles in the journal *Voprosy filosofii i psikhologii* (Questions of Philosophy and Psychology) were written. Chelpanov tried to furnish an idealistic basis for experimental psychology and thus separate it from materialism. In his outline of the history of the Moscow Psychological Institute, he wrote: "In March 1888, I delivered a report at the Moscow Psychological Society where I proved to the philosophers that experimental psychology does not lead to materialism."[1] This duality of Chelpanov's prevents his being listed among typical representatives of empirical psychology, in which he was the most active figure.

The keystone of Chelpanov's psychological conception was the theory of empirical parallelism between the soul and the body, which had its source in the psychophysical parallelism

[1] G. I. Chelpanov, "The Tasks and Organisation of the Moscow Psychological Institute", *Transactions of the All-Russia Congress on Experimental Pedagogy* St. Petersburg, 1912, p. 138 (in Russian).

of Wundt. This theory was formulated in Chelpanov's book *The Brain and the Soul*, a kind of a philosophical introduction into psychology.

Chelpanov defended empirical parallelism in the form of an imagined debate conducted by a materialist, a supporter of empirical parallelism, a representative of psychophysical monism and a spiritualist, all of whom explained each in his own way the existence of the link between psychic and physical phenomena. Chelpanov sums up their opinions as follows: the materialist sees the link between physical and psychic phenomena as that of cause and effect; hence the conclusion that only physical phenomena actually exist, while psychic ones are only derivative, secondary and do not exist independently. The supporter of psychophysical monism states that the physical and the psychic are manifestations of one and the same substance, that neither the psychic is the reason behind the physical, nor, vice versa, is the physical the cause of the psychic. They occur in a strictly parallel manner. The spiritualist recognises the existence of some spiritual substance, which is a key to all changes taking place in the psychic world. And finally, the empirical parallelist, who considers himself a physiologist, holds that a certain correlation between psychic and physical processes does exist, but he abstains from investigating the basis of that correlation, since he does not wish to go beyond the framework of empirical investigation and since that is an object to be examined by metaphysics. "Each psychic process has a corresponding physical process," Chelpanov asserts. He does not go any further and does not wish to delve into the question, whether there is only a material substance existing in the world, or also a spiritual substance, and how they influence each other. Sticking by the empirical principle, he can only state that as the psychic makes its appearance, the physical, corresponding to it, also appears, and vice versa. "This doctrine is called parallelism. The physical and psychic processes are parallel to each other. I cannot assert anything else about the link between them. I wish to adhere to the viewpoint of a strictly empirical pa-

rallelism."[1] Chelpanov regards empirical parallelism as "the most authentic" of the four doctrines he examined, while regarding psychophysical monism and spiritualism as "debatable", and materialism, as "undoubtedly wrong".

This is the dualist conception of psychophysical parallelism based on the principles of positivism in conformity with the spirit of that time, which is reflected in the refusal to explain the essence of parallelism that is just stated and in the insistent demands to adhere to a "strictly empirical" point of view. On this fundamental issue, Chelpanov approaches the neo-Kantian position of Vvedensky who also stated that the psychic phenomena "for some reason always appear parallel with certain processes in the brain".

Chelpanov's interpretation of the role and significance of the experiment compared with self-observation are also very similar to Vvedensky's ideas. Chelpanov calls to mind the dispute between Sechenov and Konstantin Kavelin on methods to be employed in psychology. In his *Tasks of Psychology* (1872) Kavelin said that the chief means to be applied in the development of psychology should be "internal vision", or "psychic vision". Sechenov objected to him in his *Psychological Sketches* (1873), stating that there is no, and there cannot be, any such internal, psychic vision. Chelpanov had to state that the public opinion sided with Sechenov, not Kavelin, and that as a result "at present [i.e., in 20 odd years.—*A.P.*] the dominant view is that the method of self-observation should be recognised as unscientific". Thus Chelpanov himself witnessed that the materialist views of Sechenov lived on and developed in the psychological science of the prerevolutionary period. This statement by Chelpanov is very important. At the same time, however, he wrote further on: "But if this debate were put to the judgement of today's science, its representatives would support Kavelin, not Seche-

[1] G. I. Chelpanov, *Selected Chapters from Psychology (Criticism of Materialism in Psychology)*, Kiev, 1899, Issue No. 2, p. 75 (in Russian).

nov." It is quite clear who are those "representatives", and of which "today's science".

The actual coexistence of two ideologically opposite groups of psychologists, which Chelpanov recognised, should be compared with his statement, which was not convincing enough, at the opening of the Psychological Institute. "The formula, 'who should develop psychology', which only recently divided philosophers-psychologists and physiologists-psychologists, has, let us hope, become a matter of the past."

The arguments Chelpanov put forward in support of the introspective method are trite and essentially similar to those resorted to by philosophers-psychologists, whose views were examined earlier, in their courses, articles and books.

Chelpanov's attitude to the experimental method is explained by his recognition of self-observation as "the only source of knowledge about psychic phenomena" and his according a secondary role to the experiment. Chelpanov stressed, as he said there is not at all "any contradiction" between the experimental method and that of self-observation: "The chief importance of the experiment consists precisely in making self-observation more precise." In this he adhered to Wundt, who saw the purpose of the experiment in rendering self-observation as precise as possible. It should be noted, though, that as compared to Wundt, Chelpanov extended somewhat the field of experimentation in psychology, including in research into higher mental processes (mainly the acts of thinking) besides the most primitive psychic states. Of course, he did not encroach on investigation of either moral or religious feelings. "It should be noted," he wrote, "that there are mental processes which by their very nature preclude any possibility of experimental study. Such are, for example, moral and religious feelings. They are not to be subject to experimental research, because they cannot be called forth, as it is usually done in an experiment."[1]

[1] G. I. Chelpanov, "On the Experimental Method in Psychology", *New Ideas in Philosophy*, 1913, *Collection No. 9*, pp. 38-39 (in Russian).

Thus, the simplest, "elementary" psychic processes were investigated according to the principles of Wundt's physiological psychology by means of laboratory equipment, by applying the three types of experimental study suggested by Wundt, which became classical—irritation, expression and response, while higher mental processes were investigated by the "experimental self-observation" method, as proposed by the Würzburg school of psychology. This "experimentation" was effected within the confines of the introspective conception of consciousness and produced a distorted notion of the essence of the processes of thinking and the laws governing them.

Chelpanov was convinced that introspective and experimental psychology can coexist. "If 10 or 15 years ago," he wrote in 1913, "experimental psychology could be opposed to introspective, at the present time there are no grounds for such opposition. With respect to experiment, we cannot say, as we did ten years ago, that we are experiencing a 'crisis' in psychology. The crisis has already passed."[1] Such declarations, however, did not rely on any proofs. Chelpanov's psychology, which combined the introspective conception of consciousness and the experimental study of external responses, itself provided practically no possibility for overcoming the crisis in psychology. Chelpanov's position should be compared with that characteristic of the state of psychology at that period offered by Lange: "Anybody who has some knowledge of contemporary psychological literature, its trends and tendencies, especially on fundamental issues, cannot doubt, I think, that our science is now going through a very difficult, though extremely fruitful, crisis."[2] Chelpanov's position was doomed in historical terms.

The theoretical propositions elaborated by Chelpanov were realised in the practical activities of the Psychological Insti-

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[1] *Ibid.*, p. 39.

[2] N. N. Lange, "Psychology", *Scientific Results*, Vol. VIII, 1914, p. 39 (in Russian).

tute he headed. Prior to the October Revolution, the Institute only had time to publish a single collection of articles, among them those by Chelpanov himself, and also by Kornilov, Rybnikov and Exemplyarsky. The article contributed by Chelpanov was aptly assessed on its scientific merit and nature by Teplov, who made a comparative analysis of the works by Chelpanov and Lange. "He [Chelpanov.—*A. P.*] published only one experimental work—'The Question of the Relationship Between Psychophysical Methods'. As he was carrying out this work, he made use of such material and technical means about which Lange could not even dream. Many associates of the Psychological Institute took part in performing experiments and processing the results (the article mentions seven persons as 'those who made the largest contribution'). The number of experiments totalled to 12,000 (Lange did not carry out as many experiments in his whole life). Yet this work did not produce any results—absolutely none. Many scholars compared various psychophysical methods prior to Chelpanov. I am under the impression that Chelpanov just wished to participate in this well-run game, for which he had all the necessary means at his disposal."[1] This is an exhaustive characterisation, and there is nothing to add.

Research carried out by Chelpanov's associates was also of an experimental nature. Thus, Kornilov's research summed up in his article, "The Question of the Nature of the Types of Simple Response", had as its goal verifying by experiment certain facts related to the characteristics of simple response (muscular, sensory and an intermediate "natural"), as well as resolution of the controversial issues that arose in the polemics between Wundt, James and Edward Titchener, on the one hand, and James Mark Baldwin and James McKeen Cattell, on the other (for instance, whether 'natural response' was an independent form or just a preliminary

[1] B. M. Teplov, "Fundamental Ideas in the Psychological Works of N. N. Lange", *Voprosy psikhologii*, No. 6, 1958, p. 63.

stage between the two extreme forms of responses). Thus the problem of the investigation is fully on the plane of "experimental psychology" developed by Chelpanov, and the methods Kornilov applied also corresponded to Chelpanov's general methodological principles. The experimental methods elaborated by Wundt were coupled with the questioning of the persons undergoing a test concerning their emotions as recommended by the Würzburg school. Kornilov, though, was opposed to Narcis Ach's introspectionism. Thus he declared, contrary to the views of his teacher Chelpanov: "So we can see that the method of active questioning applied by Ach, instead of representing psychic emotions in all their authenticity, may itself cause havoc of these emotions. A logical representation of the latter instead of their direct representation, and a complication of the emotions by arousing private thoughts when questioning instead of the necessary isolation of the studied set of emotions from all side phenomena, and an inevitable introduction of variants into every experiment instead of protection of the invariability of its conditions—these are essential shortcomings that the method of active questioning may introduce into research of psychic phenomena."

In the final count, however, this justified criticism of Ach was actually conducted by Kornilov from positions of Wundt's idealistic psychology. Opposing the method of active questioning proposed by the Würzburg school, Kornilov recognised the "complete advantage of the method used by the school of Wundt and Titchener". A genuinely scientific critique both of the subjectivism of Ach and Oswald Külpe and the dualism of Wundt and Titchener can only be undertaken from positions of dialectical materialism, with which Kornilov did not agree at that time. And still it should be said that in his assessment of investigations conducted by the Würzburg school Kornilov was nearer to Lange, this consistent opponent of Chelpanov, than to his own teacher. At the Second All-Russia Congress on Pedagogical Psychology, Lange criticised Chelpanov who eulogised investigations of men-

tal processes carried out at the Würzburg psychological laboratory led by Külpe. He stressed that in terms of methodology these investigations were a step back in comparison with typical psychological experiments.

The detailed articles, containing descriptions of a vast experimental material, by Rybnikov and Exemplyarsky ("An Outline of Experimental Research into Recognition and Reproduction" and "Materials Concerning the Question of Representation Types" respectively), dealing with problems involved in memory, reveal the same features we saw in Kornilov's article. These were an experimental verification and specification of the data obtained in research which was at that time considered classical (it should be noted that some of the corrections made by Rybnikov and Exemplyarsky are rather valuable), application of methods canonised by Hermann Ebbinghaus, Ernst Meumann and others, a wide use of self-observation, the rift between laboratory investigations of memory and the tasks involved in practically mastering the ways of better memorising at school. These articles, which undoubtedly present some interest, were still written as Kornilov's article, in the best traditions of Wundt's physiological psychology and therefore possessed all its fundamental drawbacks.

It would be a grave mistake to identify Chelpanov's theoretical credo with his disciples' and associates' empirical research and to regard Kornilov, Rybnikov and Exemplyarsky as conscious adepts of his idealism. The principled position of the head of this school of psychology was for his associates but a postulate they adopted spontaneously, which, as they thought at that time, did not interfere with fruitful activities in the field of psychology. However, Chelpanov's associates did not share all of their teacher's views: they essentially sided with Nechayev and opposed Chelpanov in the latter's polemic with Nechayev on the connection between psychology and pedagogy.

We have already noted that Kornilov opposed the method of "provocated self-observation" propagated by the Würzburg

school (which was clearly supported by Chelpanov), approaching on this issue the views of Lange. His resolute break with Chelpanov following the October Revolution, also speaks for itself. Kornilov was a people's teacher from the Altai, who became Chelpanov's assistant after he graduated from Moscow University in 1910. He regarded his scientific activity as a means of serving democratic ideals and could hardly share his teacher's reactionary views. "I have realised," Kornilov wrote, "that, though I was brought to the top on the crest of a happy wave from the multitude of people's teachers, I am obliged to give all my strength for the service of those who have always been suppressed but never caressed." However, before the revolution, Kornilov did not go beyond an emotional non-acceptance, if one may say so, of the extreme points in the ideological position of Chelpanov.[1]

Kornilov's approach to methodological problems was typical of many representatives of empirical psychology of that time, who were sincerely convinced that their refusal to take part in philosophical disputes could preserve the purity of scientific investigation. Speaking at the Second All-Russia Congress on Experimental Pedagogy in 1913, Kornilov noted that he made every effort to abstain from any philosophical generalisations which followed from his experimental data. This effort of psychologists-empiricists to stay "within the bounds of verified scientific facts" testifies to their weakness in philosophical terms. Chelpanov, however, readily entered into discourse concerning "verified scientific facts", and quite

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[1] Here is Chelpanov's "political portrait" as given in the Bolshevik newspaper *Zvezda* (Star) of February 5, 1911, which described the plight of Moscow University when the Ministry of Public Education was headed by the reactionary Lev Kasso: "Professor Leich read his lecture to a single student guarded by two policemen. Professor Chelpanov was met with whistling and shouts of 'Go Away!' The professor announced, however, that he was not concerned with this shouting and that he was going to do his duty. The police came to his assistance and arrested 12 students."

often and easily passed to philosophical generalisations of a metaphysical vintage.

We are far from trying to portray Chelpanov's work before the October Revolution in only dark colours and to characterise him as an outright reactionary like Frank or Lopatin. We must remember that he was an enthusiastic psychological researcher and that it was due to his efforts that the Moscow Psychological Institute was equipped with splendid apparatus for experimental studies. Before the Institute was established, Chelpanov went to Western Europe and America to observe how psychological laboratories were equipped. As a result of his efforts, the Moscow Psychological Institute was equipped better than any other such institute in the world. It is primarily Chelpanov's merit that Soviet psychology had at its disposal a fine experimental base in Moscow. Chelpanov summed up the experience gained in the Institute's research in his book, *Introduction to Experimental Psychology* (1915), in which he described experimental research methods applied in psychology at that time. This book had profound impact on analogous manuals published after the October Revolution, in particular, on *A Practical Guide in Experimental Psychology* edited by Kornilov et al., which was the main textbook on the methods of experimental investigations over the second half of the 1920s and the first half of the 1930s. Chelpanov rallied around himself capable young psychologists and established favourable conditions for their successful scientific creative work. Some of Chelpanov's disciples played an important role in developing the Soviet science of psychology; many of them, of course, firmly departed from their teacher on a number of fundamental issues.

Chelpanov occupied a right-wing position in Russian empirical psychology. It was via Chelpanov's views that experimental psychology was linked to official idealist philosophy. The position of Chelpanov, who was also deputy-chairman to Lopatin in the Moscow Psychological Society, was a sort of symbol. Moreover, it determined the place occupied by his experimental psychology in relation to metaphysical psychol-

ogy fortified by outright idealism. Timiryazev sharply criticised Chelpanov's experimental psychology, comparing it to "a pitiful doggie led on a string" by a servant of theology.

Nechayev, another prominent representative of empirical psychology, occupied a position which in many respects differed from that of Chelpanov. Nechayev was the head of an experimental psychology laboratory in St. Petersburg. He was noted for his activity in organising congresses on pedagogical psychology and experimental pedagogy, and his investigations into problems of memory and associations. Though he was Vvedensky's disciple, in his philosophical views Nechayev tended to neo-Kantianism and positivism. Nechayev considered himself a follower of Wilhelm Preyer, and in particular of Stanley Hall, as well as of Konstantin Ushinsky and Nikolai Pirogov, all of whom believed that pedagogy should be based on studying the pupils' mental world, on a profound knowledge of human nature.

Nechayev made stubborn efforts to dissociate himself from metaphysics in his psychological views, though in essence he was true to it in all his theoretical interpretations of psychological facts. His chief principle in psychological constructs was not to go beyond the bounds of "precise facts", i.e. empiricism.

Nechayev's laboratory (Rumyantsev, Mikhail Konorov and other prominent psychologists were on the staff) relied in its pedagogical conclusions on psychology, i.e., on the quantitative results of experimental-psychological research performed by his disciples. Here we clearly note a tendency to render an applied character to psychological science, to make it serve practice—a tendency most typical of many representatives of empirical psychology, and belief in the power of the experimental-psychological method in dealing with vital matters. These historically-progressive efforts of Nechayev and their practical thrust were supported by Lange, Lazursky and Bekhterev, but met with a negative response on the part of Vvedensky and Chelpanov. However, the falsity of methodological principles adopted in empirical psychology made it

impossible to find a scientific solution to the task of actually using it in pedagogy, though Nechayev widely proclaimed that opportunity. Thus the claims of experimental psychology of providing a basis for educational and pedagogical work at schools and turning pedagogy into applied psychology, were found groundless already at that time.

Nechayev and his adherents tried to apply mechanically the data obtained in laboratory psychological experiments to problems involved in education and upbringing. Actually, he wished to eliminate pedagogy by merging it with psychology. He also proposed to use a system of simple experiments and a quantitative approach to the problem of individual distinctions. All this met with vigorous protest from his numerous opponents, including those in the camp of empirical psychology itself. Chelpanov was one of the most consistent adversaries of Nechayev's "experimentation". In the course of polemics he warned, and not without reason, against a "profanation of science", "procreation of dilettantism in psychology, accumulation of "experimental rubbish". Public opinion sided with Chelpanov and readily shared his view that school laboratories (which Nechayev tried to introduce) were useless and even harmful. However, in doing this, as was rightly noted by Sokolov, they failed to appreciate Nechayev's essentially correct idea that psychological research should be brought closer to practical pedagogical work. Sokolov had in mind several works by Nechayev in which he threw light upon the relation of experimental psychology to issues involved in school education.

Rossolimo, an outstanding figure in Russia's medical science, a famous neurologist and psychiatrist, was also a prominent representative of empirical psychology. He made a salient contribution to the investigation of the pathophysiology of the nervous system lesions by describing a new pathological pyramid sign—the flexor reflex of toes (Rossolimo's sign). His works in anatomy dealing with research studies of the nerve fibre tracts, morphological changes as a result of cerebral circulation injuries, and many others, are of tre-

mendous scientific importance. He also carried out clinical investigations of various organic illnesses of the nervous system, such as senile chorea (1890), involuntary movement in tabes (1893), relapsing paralysis of the facial nerve in migraine (1902).

Rossolimo was always interested in psychology, though prior to 1906-1908 he turned to it only episodically, as he studied psychology and neuropathology in children. Beginning with 1906, psychological problems became central in his scientific activities. At that time, Rossolimo was an experienced clinician, firmly convinced of the validity of the experimental method which had proved its worth in medicine. As far back as 1894, he stated in his report to a meeting of the Society of Neuropathologists and Psychiatrists: "The importance of the experimental method in resolving neurological problems is not to be questioned; it fully deserves to be assigned a much greater place in our future research."[1]

Rossolimo's first attempt to apply a psychological experiment for the purpose of diagnosis and formulate a method for a quantitative analysis of mental processes in a normal and a pathological state refers to 1909; it is described in his *Psychological Profiles.* From 1909, he published several works on the methodology of an "individual psychological profile" and the results obtained in investigations relying on this methodology. He maintained that this methodology made it possible to introduce objective means of research into the science of psychology, thus turning it into a field of exact knowledge. To verify and apply this methodology by experiment, Rossolimo set up a small scientific research laboratory, which was called the Institute of Child Psychology and Neurology and was staffed by researchers who left Moscow University after the punitive measure applied to it by Minister Kasso in 1911, among them B. N. Mogilnitsky, P. F. Chertkov, Ye. K. Krasnushkin, Yu. N. Afinsky.

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[1] G. I. Rossolimo, *The Experimental Method in Studying Nervous and Mental Diseases,* Moscow, 1894, p. 12 (in Russian).

Rossolimo acknowledged in his *Autobiography* that his method of drawing a "psychological profile" was directly connected with Nechayev's ideas. Actually, this method, which became well known both in Russia and abroad, was one of the earliest test systems in the history of psychology for determining mental capacity. It was not by chance that in the late 1920s, Nechayev mentioned Rossolimo as one of the founders of pedology in our country. An organic link of Rossolimo's psychological works with the branch of empirical psychology led by Nechayev is also proved by the following words from the Address of the Society of Neuropathologists and Psychiatrists at Moscow University handed to Rossolimo on the occasion of the 40-year anniversary of his medical and scientific activity: "Having begun since 1908 psychological investigations by the method of testing and relying on the works of Prof. Nechayev and Bernstein, you have soon formulated ... a new system of examination known as that of 'psychological profiles'."

The "individual psychological profile" amounted to a definition of eleven mental processes which were assessed by the ten-mark system on the basis of answers provided to ten questions of an extremely arbitrary nature. As a result, a curve ("profile") was obtained, which allegedly characterised the power of the inborn ("natural") intellect, which was opposed, as a certain stable quality, to a "secondary intellect" constantly improved under external impacts. This thesis testifies that Rossolimo's positions were close to Lazursky's erroneous idea on man's endo- and exo-psychical traits.

Rossolimo's activity in the field of psychological experiment is a fine example of how helpless, and sometimes even harmful empirical psychology can be, no matter how noble its aims, if it is not fortified by a sound methodological and theoretical base. Still we must note that, though he centered his scientific activity as a psychologist on the problem of "psychological profiles", Rossolimo's scientific legacy contains much valuable psychological research material, which is free from testological influences. Here should be mentioned his investi-

gations of phenomena connected with hypnosis, the psychophysiology of the talent for music, the causes behind formation of bad habits in children. The psychological characteristics of different personalities, including his close friend Anton Chekhov, left by Rossolimo, are also of substantial interest. His associates stated that Rossolimo's psychological analysis in describing patients' suffering from various kinds of neurosis and psychosis, produced better results than those obtained later by Freud's followers through their "tedious and far from harmless psychoanalysis".

Our description of the empirical trend could be extended by exposing the views of psychologists rallied around the Psychoneurological Institute, Ushinsky Pedological Courses, the experimental pedagogical psychology laboratory at the Pedagogical Museum of Military Educational Establishments in Petersburg (Konorov, Povarnin, Rumyantsev, Kanayev and other researchers guided by Nechayev and Lazursky), the psychological laboratory at the Moscow Pedagogical Assembly (Alexander Bernstein, Caesar Baltalon) and other psychological institutions.

The general pattern of the relationship of forces in empirical psychology, the dynamics of the evolution of its separate schools and trends, as well as the struggle waged between them, were reflected in vigorous polemics at congresses on pedagogical psychology (1906 and 1909) and experimental pedagogy (1910, 1913, 1916).

Before passing to an examination of activities by the most prominent figures in natural-scientific psychology—Bekhterev, Wagner and Lange, we must once again remind the readers of the relative nature of the border between the empirical and natural-scientific trends in the science of psychology of that time. Strictly speaking, the natural-scientific trend could be regarded as the left wing of empirical psychology, and the scientists representing this trend—as progressively-minded scholars who tried to overcome the limitations of empiricism in experimental psychology, which was possible in the final analysis only on the basis of dialectical materialism, by no

means typical of these scientists in the period under review. Still this trend does have certain features (notably its link with traditions of Russia's natural science, its criticism of subjectivism and introspectionism), which make it possible to isolate it from the main body of empirical psychology.

Bekhterev was one of the most prominent representatives of the natural-scientific trend in psychology. In assessing his contributions to psychology in the early 20th century, one should not reduce it to his "psychoreflexology" alone, in which he was mostly engrossed at that period, but should take into account the whole of his activities which went far beyond the bounds of reflexological constructs. Bekhterev possessed not one, but several remarkable talents—as a psychologist, physiologist, psychiatrist and clinician-neurologist. He was also a gifted organiser in the field of psychology, and one of the leaders of its progressive wing. The Psychoneurological Institute he headed was the centre of attraction for many capable researchers. The activity of Lazursky, Wagner, Mikhail Bassov, Victor Osipov, Vladimir Myasishchev, Victor Protopopov, K. I. Platonov and many other scholars who later contributed to the establishment of Soviet psychological science, is associated to a greater or lesser degree with the work of this institution. Bekhterev himself supervised a number of experimental studies carried out at the institute at that time.

Bekhterev unambiguously advanced the proposal to separate psychology from idealist philosophy at the universities and to turn psychology into a natural-science discipline. "Despite the fact that it is of tremendous importance for general education as a science, psychology is listed among obligatory disciplines only at the faculty of history and philology at the universities, but even there it has no chair of its own and is placed within the competence of the chair of philosophy, i.e. in the position of a subordinate scientific discipline. Constantly dragging at the heel of philosophy, it naturally cannot win a place of importance among other sciences taught, which belongs to it by right, or develop as it should," Bekhterev wrote. The publications he edited—*Bulletin of Psychology, Criminal*

Anthropology and Pedology, A Review of Psychiatry, Neurology and Experimental Psychology (1899-1918), and *Neurological News* (1893-1918)—differed favourably from the *Questions of Philosophy and Psychology* in that they raised vitally important problems linked with the needs of medicine, pedagogy and law, and were not marked by academism.

In 1904, Bekhterev published his article, "Objective Psychology and Its Subject-Matter"[1], in which he summed up the results of a considerable period in the evolution of his psychological views. The period started approximately in 1885, when Bekhterev began delivering lectures at Kazan University. In his article, he expressed the ideas he subsequently reiterated, with only minor additions and modifications, in his works, *A Substantiation of Objective Psychology* (1907), *On the Methods of Objective Psychology* (1908), *An Objective Investigation of Neuropsychological Activity* (a report at the 1907 International Congress), *What Is Objective Psychology* (1909), *Chief Principles of So-Called Objective Psychology, Or Psychoreflexology* (1910), *On the Chief Manifestations of Neuropsychic Activity in Their Objective Study* (1911), and others. The same ideas also underlie his fundamental *Objective Psychology* (1907-1917).

Bekhterev stated that, if a researcher relies only on self-observation and ignores studying objective phenomena in which mental processes are reflected, he can get a wrong idea of the actual pattern of subjective states. In his opinion, studying the psyche cannot and should not be reduced to fathoming only its subjective aspect even in a grown-up, but should also seriously concern itself with examining the objective aspect of his mental activity. Bekhterev demonstrated that subjective psychology is helpless in studying pathological states of the mind, peculiarities of the child's psyche and the psychic world of animals. In this respect, he remarks, one cannot but support the opinion voiced by animal psychologist Wagner.

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[1] V. M. Bekhterev, "Objective Psychology and Its Subject-Matter", *Vestnik psikhologii*, No. 9-10, 1904.

Bekhterev cited the latter's *Questions of Animal Psychology*, where Wagner asserts that "the subjective method itself envisages conditions that make the conclusions arrived at through this method verifiable and therefore doubtful. Hence the given method cannot be regarded as reliable to the degree which we have the right to demand of an exact science."[1]

Bekhterev also emphasises his solidarity with Pavlov's objective estimate of the mental life of animals, referring to his *Experimental Psychology and Psychopathology on Animals.*

The similarity of Pavlov's, Bekhterev's and Wagner's views reveals typical features of the natural-scientific trend in psychology. The common position of Pavlov and Bekhterev on the issue of the reflex nature of mental activity is seen in the wide use Bekhterev made of Pavlov's method of conditioned reflexes. Pavlov himself wrote: "In Europe, our investigations were supported, a few years after they were launched, by Bekhterev and his disciples."[2] The research carried out by Bekhterev's associates Protopopov, Platonov and others in 1908-1909, using the method of conditioned motor ("combinative" in Bekhterev's term) reflexes, began simultaneously with first attempts at studying man's higher nervous activity by the same method (studying the motor responses of the mouth and the swallowing movement) in the Pavlov school (Nikolai Krasnogorsky). Anatoly Ivanov-Smolensky wrote: "The first experiment in ... introducing the doctrine of higher nervous activity in the sphere of neuropathology and psychiatry was conducted by Bekhterev and his followers (1908-1909)... Bekhterev's generally recognised merit was that he was the first representative of neuropathology and psychiatry, who correctly assessed the vistas Pavlov's doctrine opened for medical disciplines."[3]

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[1] V. A. Wagner, *Questions of Animal Psychology*, St. Petersburg, 1896, p. 35 (in Russian).

[2] I. P. Pavlov, *Complete Works*, Vol. III, Moscow, Leningrad, 1949, p. 19 (in Russian).

[3] A. G. Ivanov-Smolensky, *An Outline of the Pathophysiology of Higher Nervous Activity*, Moscow, 1949, p. 251 (in Russian).

Bekhterev consistently tried to emphasise the link between nervous activity and the brain and nervous processes, and to break with the theory of psychophysical parallelism in this issue. It was wrong, in his opinion, to assert that the two processes—the mental or spiritual, and the physical or material—take place in parallel. "We must firmly adhere to the viewpoint," he wrote, "that what we have here are not two processes proceeding at the same time, but a single process expressed simultaneously in material or objective, and in nonmaterial or subjective phenomena."[1]

That Bekhterev's views depended on Sechenov's reflex theory is quite obvious from the content of his article "Objective Psychology and Its Subject-Matter", as well as from a number of his other articles and monographs. Documents found by Isayeva in Bekhterev's personal archive also testify to this. Bekhterev describes in these documents the main idea underlying Sechenov's *Reflexes of the Brain* and stresses that the book provided a general scheme of so-called mental processes, linking them to the influence of external factors and in the final count reducing them to motion. This idea is lauded by Bekhterev as a soaring flight of human thought. Referring to the works by Ye. P. Isayeva and Ye. A. Budilova, Rubinstein ventures an opinion that Bekhterev's reflexology was in essence nothing less than the realisation of Sechenov's reflex theory, which became "shifted" in Bekhterev because he accorded the chief place in the reflex act to its third element (motion), to the detriment of its central element. As he followed the path indicated by Sechenov, Bekhterev could not but side with the camp of natural-scientific psychology. However, the specific conditions in which psychology evolved at that time led to a number of serious mistakes in his theoretical conclusions.

Proceeding from the propositions formulated by Sechenov in his *Reflexes of the Brain*, Bekhterev stated that there does

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[1] V. M. Bekhterev, "Objective Psychology and Its Subject-Matter", *Vestnik psikhologii*, No. 9-10, 1904, p. 660.

not exist any conscious or unconscious process of thinking that would not be eventually expressed in some objective ways. Objective psychology, he continued, should be a sum-total of knowledge related to objective manifestations of the neuropsyche. It was implied that objective psychology would employ exclusively objective methods and that all neuropsychic processes would be characterised only in their objective aspect. What was meant here was not only the registering of responses themselves, but also relating them to the external irritations that initiated these responses. At the same time, objective psychology rejected "purely metaphysical terminology" applied in subjective psychology, such as "memory", "emotions", "attention" and replaced them with "traces", "general tone", "concentration".

For all the progressive character of the struggle Bekhterev waged against subjective psychology and for applying objective methods in research, he could not overcome the interpretation of psychic processes as epiphenomena of behavioural acts. While opposing psychological notions, he erroneously ignored real psychic phenomena reflected in these concepts. This aspect of Bekhterev's views was later elaborated in Watson's behaviourism. Bekhterev's anti-psychological tendencies, which were at first directed against subjectivism and introspectionism, became ever stronger with time and the methodological erroneousness of the entire Bekhterev's psycho-reflexology became more pronounced (later he changed the term to reflexology).

In his book, *The Psyche and Life*, Bekhterev interprets the essence of the psychic in the spirit of the energy concept, and this can be clearly traced in all his articles "substantiating" objective psychology. Sechenov's theory on central inhibition is treated by Bekhterev in such a way that the conscious is regarded as the result of a "retardation of neuropsychic energy". Bekhterev's theoretical views were in general not quite free from positivism, which at that time was mistaken by many scholars for a scientific philosophy of natural science. In 1911, Yuri Portugalov published an article, in which he said

that there was "much in common" between objective psychology and empirio-criticism as to their methodology. True, Portugalov's comparisons are sometimes objectionable, and he himself confessed that he "did not know for certain" Bekhterev's present attitude towards Avenarius and Mach and that earlier, at the beginning of 1900, Bekhterev saw these views "in a somewhat sceptical manner". However, the very fact of the article being printed in the *Bulletin of Psychology* edited by Bekhterev himself and not meeting any opposition on his part, speaks for itself. Neither did Bekhterev oppose the publication, in the same journal, of articles by N. Kostylev, who recognised Bekhterev's succession of Sechenov's views, but at the same time tried to link objective psychology to the idealism of the Würzburg school and emphasised its closeness to Machism.

As we can see from the above, Bekhterev's psychological system is fortified by eclectic methodology. It revealed a progressive tendency in its reflex ideas, but was at the same time dependent upon various idealist and mechanistic philosophical conceptions. During the period under review, objective psychology was mostly noted for its progressive features and its active opposition to introspective psychology, and was regarded as a natural-scientific psychological doctrine.

Psychologists who openly sided with idealism brought Bekhterev's reflexological conception under devastating criticism, for example, in an article of A. M. Shcherbina, in which the "vices" of objective psychology, as seen by a supporter of introspectionism, are listed. As he examines the main propositions of Bekhterev's article, "A Substantiation of Objective Psychology", Shcherbina selects the theses which in fact are characteristic of his own position: Bekhterev's criticism of self-observation, contraposition of "objective" to subjective psychology, the concept of neuropsyche, objections to psychophysical parallelism and contention that the objective method is to be used in studying neuropsychic processes—all evoke indignation on the part of Shcherbina. This is quite understandable: as a supporter of subjectivism and introspection-

ism, he could not share a single one of Bekhterev's positions. He wrote, for example: "An attempt to set up a science of facts that are only accessible to self-observation while rejecting self-observation itself, contains an internal contradiction."[1] He ignored the fact that his own reasoning allows for a logical error: for Bekhterev, psychology ("objective psychology") is not a "science of facts that are only accessible to self-observation" but a science of the relation of reflex responses to external irritations which are an initial source of these responses. Thus, the "contradiction" Shcherbina discovered in Bekhterev's theory in fact amounted to a shuffling of theses.

The failure of idealistic metaphysical psychology to provide sound criticism of Bekhterev's theory can be explained by the fact that "objective psychology" was a more progressive psychological system as compared to the former. It was only as a result of the debate which took place in the late 1920s-early 1930s, when mechanism in philosophy and psychology was criticised from positions of dialectical materialism, that the methodological insolvency of "behaviourism" in general and Bekhterev's reflexology in particular was brought to light.

The question raised by Bekhterev—"Who should elaborate psychology and how?"—compelled Russian natural scientists to seriously think over the destiny of psychological science and come to the conclusion that it can be turned into a "positive" science only if psychological investigation is freed from the influence of metaphysical philosophers. Sechenov unequivocally demanded that complex psychic phenomena be studied by natural-scientific objective means and even suggested a plan for restructuring psychology along these lines.

Sechenov's plan was for the most part realised in Pavlov's doctrine on conditioned reflexes, which demonstrated that it was possible to investigate the mental process by physiological means. Sechenov, however, outlined yet another aspect of

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[1] A. M. Shcherbina, "Can Psychology Develop Without Self-Observation?", *Voprosy filosofii i psikhologii,* Book 4 (94), 1908, p. 543.

research—to trace the development of mental processes in historical terms, in the evolution of the entire animal kingdom. Emphasising that, in the process of cognition one "should go from the simple to the complex, or, which is the same, explain the complex through the simple and by no means vice versa", Sechenov thought that "it is the simplest psychic manifestations in animals, not in man, that should be taken as initial material for the investigation of mental facts". And he concluded: "Comparison of concrete psychic phenomena in man and animals is comparative psychology."[1] He stressed the great value of this branch of psychology: "Such study would be especially important in classifying psychic phenomena, since it could probably reduce many complex forms to less numerous simplest types and besides, it could identify transitional steps from one form to another."

Somewhat later, in his "Elements of Thought", Sechenov said it was necessary to develop evolutionary psychology on the basis of Darwin's theory: "The great theory of Darwin concerning the origin of species, as is well-known, placed the issue of evolution or continuity in the development of animal forms on such a fundamental base that the vast majority of naturalists at present adhere to this viewpoint. Thus, the same vast majority of naturalists are logically bound to recognise in principle the evolution of mental activities as well."[2]

This aspect of psychological research, indicated by Sechenov, was elaborated in the works of Wagner, who actually started a concrete development of comparative or evolutionary psychology through an objective study of the psychic life of animals.

To understand Wagner's principles of approach to psychological investigations, his article, "A. I. Herzen as a Naturalist" is of great interest. Here, he develops his ideas outlined in his earlier article, "Metaphysics and Science", and several other

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[1] I. M. Sechenov, *Selected Philosophical and Psychological Works*, Moscow, 1947, pp. 172-76 (in Russian).

[2] *Ibid.*, p. 178.

works.[1] Wagner reveals the essence of the struggle Herzen waged both against supporters of Schelling who ignored facts, and against empiricists who wished to "see their subject in a purely empirical, passive way", just observing it. This clash between philosophical idealism which "did nothing for natural science as such", and empiricism, and the erroneousness of both positions, were at that time clearly discerned only by two great minds —Goethe and the young Herzen. Wagner cites Herzen's words, "There is no science without empiria (experience or experiment)," and emphasises that Herzen held philosophical thought as no less important than empiricism. Wagner's article,"A. I. Herzen as a Naturalist", is an analysis of the first of Herzen's "Letters on the Study of Nature", which was highly assessed by Lenin. In May 1912 in the newspaper *The Social-Democrat* Lenin wrote: "The first of his *Letters on the Study of Nature*, 'Empiricism and Idealism', written in 1844, reveals to us a thinker who even now stands head and shoulders above the multitude of modern empiricist natural scientists and the host of present-day idealist and semi-idealist philosophers. Herzen came right up to dialectical materialism, and halted—before historical materialism."[2]

Wagner indeed turns to Herzen for guidance in the sharp and controversial issues of the science of his time, in parti-

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[1] V. A. Wagner, "A. I. Herzen as a Naturalist", *Vestnik Yevropy*, No. 9, 1914. The article differs in principle from numerous articles published at that time, which falsified Herzen's views and depicted him as an idealist and a "religious seeker", a champion of "pure" science and "pure" knowledge, an enemy of atheism and materialist philosophy. They portrayed him as an apologist who only rehashed the ideas formulated in Western philosophy—the point on which all reactionary historians of philosophy held similar opinions. In Wagner's view, Herzen's philosophical ideas were not assessed by their merit because they were too advanced even for West European scholars, and completely beyond the comprehension in Russia of the 1840s, where they were actually expatiated.

[2] V. I. Lenin, "In Memory of Herzen", *Collected Works*, Vol. 18, 1974, p. 26.

cular of psychology, the discipline he was then engaged in elaborating for more than 20 years. The conflict between empiricism and idealism was particularly acute in that science and finally plunged it into a deep crisis. On the one hand, empirical psychology studied facts—psychic phenomena, but was shy in tackling the essence of these phenomena, which led to the establishment of a psychology without the soul, psyche and consciousness. The epigones of Immanuel Kant elaborated empirical psychology "without any metaphysics", underlied by vulgar mechanism. On the other hand, the systems of speculative idealist psychology flourished. They held in contempt the facts obtained through painful efforts by psychologists-empiricists and clung exclusively to philosophical "revelations" and psychological material out of the "depth of one's own soul". This conflict also involved comparative psychology, giving rise to a debate between subjectivists and anthropomorphists, on the one hand, and supporters of mechanistic automatism and creeping empiricism in describing animal behaviour, on the other.

Wagner wrote of those "patented scholars" who only appreciate facts in science, asserting that theories vanish but facts remain. "The facts," he noted, "change depending on theories and because of them." The facts dealt with in the description of Carolus Linnaeus, Georges Louis Buffon and Jean Baptiste Lamarck were the same. However, they were presented as quite different because of the different interpretation. "To understand them . . . one must know . . . how to use the philosophical method of induction. One should remember that side by side with the dismemberment of science which is necessary in the interests of methods and ways of cognition rather than of cognising the truth, there exists a high scientific monism, about which Herzen wrote."[1] In his numerous studies of problems involved in comparative psychology based on rich factual material, Wagner never became

[1] V. A. Wagner, "A. I. Herzen as a Naturalist", *Vestnik Yevropy*, No. 9, 1914, p. 204.

"a slave of facts". In some cases he even rose to "a higher scientific monism", the term he used to describe Herzen's philosophical materialism.

In his two-volume *Biological Foundations of Comparative Psychology (Biopsychology)*, Wagner contraposes scientific world outlook in comparative psychological studies and the world view which was fully formulated, in Wagner's opinion, by Descartes. It amounted to a negation of the existence of the soul in animals and their representation as a kind of automatons, only more sophisticated than any mechanism built by man. Wagner comes to quite a correct conclusion that "this world view closely corresponded to the Christian doctrine of the immortality of the soul" and that "its contemporary importance is nil". He criticises efforts to revive the theological world view on the basis of anti-Darwinism, pointing out that such a view on the subject-matter of comparative psychology is "but a rudiment of once powerful theological philosophy, modified and adapted to the data of modern biological research".[1]

That this "rudiment" of medieval theological philosophy was quite alive at the time of Wagner can be seen, for example, from the article of Alexander Chemodanov, in which he maintains that there is a wide gap between animals and man, between human consciousness and the animal soul. He directly indicates a biblical legend to this effect in his attempt to denigrate evolutionary ideas of continuity in the development of the psyche and to "prove" the futility of studying man's soul by natural-scientific means, i.e. the same as were employed in studying animal psychology. Chemodanov seems to be envisaging that science will apply the same methods of study it used to examine animal psychology, in dealing with the soul of human beings, the "domain" of the Church and its henchmen in philosophy.

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[1] V. A. Wagner, *Biological Foundations of Comparative Psychology (Biopsychology)*, Vol. I-II, St. Petersburg, Moscow, 1910-1913, p. 7 (in Russian).

The metaphysical trend, which came in the footsteps of the theological, was also rudimentary. "Metaphysics is the sister of theology in its view of the soul as an independent substance," Wagner stated.[1]

As Wagner correctly noted, contemporary metaphysicians all "try to reconcile metaphysics with science by adapting it to the data obtained by the latter". Now, they did not lay claim to the infallibility of their contemplations but tried to prove that there was no conflict between a metaphysical and a scientific conclusion of the "problems of the spirit and life". Wagner firmly states: "I think these arguments are invalid, and reconciliation between metaphysics and science is impossible and pointless." It should also be recalled that Wagner expressed the same idea in his earlier work, *Metaphysics and Science* (1898), as he criticised Vvedensky.

The scientific period in the history of comparative psychology is characterised, according to Wagner, by a clash between two opposite schools. One of these schools propagated the idea that there is nothing at all in the human psyche that would not be found in the psychology of animals. Hence, since the study of psychic phenomena in general began with man, the whole animal kingdom was declared to possess consciousness, will power and mind. This, in Wagner's expression, was "monism from above". Despite the obvious erroneousness of final conclusions made by many scholars who drew an analogy between the actions of animals and people, this subjective method had many convinced supporters and theoreticians, among them Wundt, Erich Wasmann and George Romanes.

Wagner rejected the subjective method, even when supplied with corrections and recommendations "to apply it with circumspection", and all types of reservations typical of Wundt, Wasmann and Romanes. "Neither the theories of Romanes nor correctives introduced by Wasmann have proved the scientific validity of the subjective method," Wagner said. "I

[1] *Ibid.*, p. 8.

think that their failure is not due to any shortcomings in their argumentation or insufficiency of their ideas, but exclusively to the fallaciousness of the method itself, in whose defence they all come, though for different reasons."[1]

It would be difficult indeed to find another Russian biologist or psychologist of that period, with the exception of Pavlov, who was so convincing, consistent and resolute in his efforts to destroy the belief in the power of the subjective method, and in his criticism of anthropomorphism and idealism in natural science, as Wagner. Some natural scientists even thought he was too rude in doing so, and "given to exaggerations". Thus Yuri Filippchenko, a biologist, who seemed to sympathise with Wagner's rejection of "monism from above", at the same time, like Wasmann, was inclined to a superficial criticism of the "current psychology" of animals. He maintained that the "method of analogy" should not be negated as a whole and that "without a certain element of analogy with the psyche of man" no psychology of animals could do. Still he fully subscribes to Wasmann's words: "Man cannot directly penetrate the psychic processes in animal, but can only judge them on the basis of their external actions... These manifestations of animals' spiritual life should be later compared with his own manifestations whose internal causes he knows from his self-consciousness."[2] Further on, Filippchenko asserted that "the need for such comparisons" is not negated by Wagner himself and cited his words to the effect that in tackling its problems, objective biopsychology also "applies comparison of psychic abilities, though in an entirely different way, both with respect to the material compared and the method of its processing".

Here we see a substitution of the issue of comparison between the psyche of man and animals (the subject-matter of Wagner's comparative psychology) for that of the possibility

[1] V. A. Wagner, *Biological Foundations of Comparative Psychology*, p. 138.

[2] Yu. Filippchenko, "The Subject-Matter of Animal Psychology and Its Methods", *New Ideas in Philosophy*, Collection No. 10, 1913.

of drawing analogies between the psyche of man and of animals (which is a problem of methods used in comparative psychology). While recognising the need of comparing the psyche of man and animals, without which comparative psychology could not exist at all, Wagner rejected the necessity and possibility of applying the method of drawing an analogy between the psyche of man and animals in biopsychology. Wagner occupied a position in science which radically differed from that of Nikolai Lossky and Ernest Radlov, editors of the *New Ideas in Philosophy*, who responded with opposition and outright hostility.

Another trend, which was opposite to "monism from above", was characterised by Wagner as "monism from below". While anthropomorphists and subjectivists investigated animal psychology from the angle of the human psyche, "monists from below" (Wagner counted Jacques Loeb among them), vice versa, measured the human psyche by the yardstick of unicellular organisms, as in the study of the psyche in the animal kingdom.

"Monists from above" saw the mind and consciousness in everything, and finally recognised them as "spilled all over the Universe". "Monists from below", on the contrary, were only inclined to see automatons in all organisms, from infusoria and right up to man. The former recognised the psychical world as active, though they characterised this activeness in subjectivist and theological terms; the latter assumed that the animal kingdom was passive and the activity and destiny of living things were fully preordained by the "physico-chemical properties of their organisation". "Monists from above" based their constructs on "judgements formulated by an analogy with man", and their counterparts relied in the studies on the data produced by physico-chemical laboratory research.

This is the way Wagner characterised the difference between the two trends in comparative psychology. He managed to expose the radical, fundamental shortcomings of both, demonstrating that one trend came down to anthropomorph-

ism, subjectivism and introspectionism, i.e., in the final count, to idealist errors in its conception of the development of the psyche, and the other—to considering animals, including higher animals and even man, to be passive automatons: it biologised human nature, unable to take into account the qualitative changes typical of the higher levels of evolution; in the final analysis that amounted to metaphysical and mechanical errors in its conception of development.

Wagner even realised that the extreme positions of mechanism and idealism in their characteristics of the evolutionary process inevitably came close to each other: "Extremities tend to meet, thus there is nothing surprising in the fact that monists 'from below' in their extreme conclusions come to the same error as monists 'from above', only from an opposite side. The latter raise the animal kingdom to the top level and endow this kingdom, down to the protozoa, with the mind, consciousness and will-power, proceeding from the proposition that man possesses only such psychic traits that are possessed by animals." "Monists from below", proceeding from the same assumption that from the psychological point of view man does not present anything exclusive in the world of living beings, reduce this world as a whole to the level of the lower animals, arriving at a conclusion that man's activity is automatic to the same extent as that of infusoria.

With respect to Wagner's criticism of the views of "monists from below", we must elucidate, in a few words, his far from simple attitude towards Pavlov's physiological theory. While giving the great physiologist his due (Wagner called Pavlov "outstanding in talent") and sharing his critical position as concerns subjectivism and anthropomorphism, Wagner failed to understand the whole of his teaching, in particular the prospects presented by his theory of conditioned reflexes. Wagner thought the method of conditioned reflexes to be useful for studying "reasonable processes of the lower order, but insufficient for investigating higher processes". He insisted that the reflex theory, being inadequate for explaining higher processes, was to the same degree powerless to explain

the main material of comparative psychology—instincts. The physiological mechanism of instincts is as yet unknown and cannot be reduced to an unconditioned reflex, was Wagner's conclusion.

Wagner's lack of insight in assessing Pavlov's teaching was due to the fact that he regarded it as largely mechanical and close to "monism from below". At that time, certain essential concepts had not yet been formulated in the theory of conditioned reflexes. Thus it was rather difficult to compare instincts and unconditioned reflexes, conditioned reflexes and higher nervous processes. It was only by the mid-1920s that the concept of the chain reflex had been formed, which enabled scholars to interpret instinctive actions in physiological terms; somewhat later, the concept of signal systems appeared and the conditioned-reflex basis of conscious mental activity of people was finally created.

Wagner's negative attitude towards the efforts of certain philosophising physiologists to couple metaphysics and idealism with physiology (he never counted Pavlov among them, though some of his associates belonged to that group of physiologists), was quite legitimate. "When finding themselves in the field of abstract arguments, alien to them, physiologists often go so deeply into metaphysics that one cannot but be surprised at how can they combine in one and the same brain such contradictory ways of thinking," Wagner wrote.[1]

The view of animal psychology as a purely anthropomorphist and subjectivist science by many physiologists, including Pavlov himself, caused a negative reaction in Wagner. Pavlov regarded an animal psychologist as a person who "wished to penetrate the soul of a dog", and any psychological thinking as an "indeterministic argument". At the time when Pavlov worked on the chief aspects of his teaching of the physiology of higher nervous activity and when Wag-

[1] V. A. Wagner, "Physiology and Biology in the Resolution of Psychological Problems", *New Ideas in Biology*, Issue No. 6, St. Petersburg, 1914, p. 16.

ner elaborated the "biological foundations of comparative psychology", Sikorsky wrote quite sincerely of the "aesthetic feelings" in fishes, "understanding of music" in amphibians, "intellectual exercises" in parrots and a "sense of veneration" in bulls. Such anthropomorphism was equally unacceptable both to Pavlov and Wagner.

The fact that Pavlov and Wagner disagreed on certain matters can be explained in historical terms: it was really difficult at that period to resolve gnoseological problems, in particular the psychophysical problem. As a result, Wagner erroneously regarded Pavlov as a representative of the mechanical (in the spirit of Loeb) physiological school, while Pavlov, also without any grounds, saw no exceptions among animal psychologists, sharing anti-anthropomorphist and anti-subjectivist positions.

It is remarkable that Lange noticed the objective similarity of Pavlov's and Wagner's views even before the revolution. As he criticised psychophysical parallelism, or "parallelistic automatism" propagated by mechanical physiologists, Lange advanced arguments he borrowed from evolutionary psychology. He pointed out that "parallelistic automatism" cannot explain why and in what way mental life developed. If this life has no impact on the organism and its movements, he argued, then the evolutionary theory is inapplicable to psychology. "This mental life is of no use to the organism, it could act in the same way in the complete absence of the psyche. But if we consider mental life as biologically important, if we see evolution in its development, this psyche cannot be useless for the self-preservation of the organism." The entire section "Biological Importance of Mental Life" in Lange's "Psychology" clearly indicates dependence of Lange's argumentation on Wagner's views. He also cites from his works, and calls him "a well-known biologist" and "an adherent of purely objective animal psychology".

However, most important is that Lange in this same passage separated Pavlov's views from the mechanical system of "old physiology" and wrote (having in mind Pavlov's

school) that "in physiology itself we now encounter a different striving towards extension of old physiological concepts to a broad biological meaning. In particular, treated in this way was the concept of reflex, that foundation of a purely mechanical interpretation of the animal's movement." Thus, it is clear that already at that time Lange realised that the mechanical conception of reflex going back to Descartes was reworked in Pavlov's reflex theory, in his teaching on conditioned reflexes. Wagner failed to see that far, but it was precisely in that reworking that the fundamental difference between Pavlov's teaching and the mechanical positions consisted: "Famous investigations carried out by Prof. Pavlov concerning reflex salivation and secretion of the gastric juice," Lange wrote, "have shown what diverse factors, including psychic ones, exert an influence upon these reflexes. The formerly accepted notion of the reflex as a process completely independent of the psyche proves to be essentially dogmatic and insufficient."[1] We can see that Lange justifiably regards Pavlov as being closer to evolutionist biologists, whose most outstanding representative Wagner was, than to mechanical physiologists.

While waging a struggle on two fronts—against anthropomorphism and biologisation in comparative psychology, Wagner elaborated objective methods for studying animals' psychic activity. In his opinion, the naturalist psychologist who proceeds from the genetic similarity of all animal forms, should compare psychic manifestations of a certain type in one form with such manifestations in the closest related forms in the evolutionary row, from which this comparison can be continued even further, and not with those in man. Wagner's chief works on animal psychology are based on this objective method and demonstrate that it is quite fruitful. Even those who never sympathised with his struggle against subjectivism—Filippchenko and Karavayev among others—could

[1] N. N. Lange, "Psychology", *Scientific Results*, Vol. VIII, 1914, p. 89 (in Russian).

not deny the great role played by the comparative psychology methods elaborated by Wagner in the development of animal psychology.

Wagner was regarded by his contemporaries as a learned psychologist who warded off the onslaught of metaphysical psychology from positions of advanced natural science. Thus, A. K. Borsuk directly counterposed Vvedensky's views on the destiny of psychology to those of Wagner, who thought that "psychology cannot be a science if it does not rely on data obtained by natural science". Drawing on Wagner's ideas, he stresses the fact that comparative psychology, i.e. psychology studying "the origins of the psyche in the process of life evolution", is but a trend in contemporary psychology, "is a temporary state of affairs". "There is not, and there cannot be any scientific understanding of the psyche of any organism outside the laws and principles established by the theory of development."[1]

However, it is only in Soviet psychology that development of the psyche has become not only more or less a specific field of research but also the general principle in investigation of all psychological problems. Wagner's genetic ideas developed in his works on comparative psychology, have become an integral part of the Soviet science of psychology.

In the period under consideration, scholars who sided with the natural-scientific trend in psychology were primarily natural scientists. Among psychologists who lectured at the universities and were attached to chairs of philosophy, only Lange had the courage to connect his activities with progressive trends in the science of psychology. Though formally he remained a representative of official University psychology, on a number of issues he adhered to positions of natural-scientific materialism. The contradictory position occupied by Lange gave birth to a contradictory assessment of the essence

[1] A. K. Borsuk, "Introductory Lecture to Practical Studies on Comparative Psychology", *Vestnik psikhologii*, Issue No. 5, 1916, pp. 42-43.

of his psychological views. Teplov, for example, asserted that Lange rejected all "open" idealism and held progressive views on fundamental psychological questions which objectively led him to a materialist interpretation of the psyche. He emphasised that Lange sided with materialism on the question what is primary—matter or consciousness, though the limited nature of his philosophical views accounted for his retreat to a dualistic stand in his further elaboration of the "psychophysical problem".

A vital link between psychology and traditions of materialist natural science is the primary and determinative feature of the natural-scientific trend in psychology. Lange's entire activity was permeated by these traditions. In one of his earliest works, he treated, in Sechenov's spirit, a volitional act as the same reaction of an organism on external irritation as a reflex. Lange, like Sechenov, always proceeded from the existence of a motor component in the psychic process, not only in his interpretation of the nature of a volitional act, but also in his motor theory of attention, and in the question of memory and internal speech. The law of perception formulated by Lange, in which the stadial character of the perceptive process, succession of the phases of perception and its increasing differentiation are stressed, should also be brought to mind. The link between his ideas and those of Sechenov is apparent; the latter saw transition from sensation to perception as that from a less definite, and therefore more fused, form to a more definite and dismembered one.

Like all proponents of the natural-scientific trend in psychology, Lange was far from counterposing man's mind to the psychic life of other living creatures, as he tried to determine the place occupied by man's mental life in the general evolutionary development of the psyche. It is not accidental that he himself called his system of psychology "biological psychology". He maintained that, no matter how infinitely diverse the types of psychic existence, all of them manifest the same basic structure, the same laws, and the same biological factors. "Distinctions between the psychic life of creatures

occupying the opposite ends of the ladder are no greater than the organism's morphological and physiological distinctions," he wrote.

Lange came to an important conclusion that, though man's mental life may be conceived as something specific and exclusive, this does not mean anything: it is in fact an illusion, an error of vision, a kind of egocentric self-indulgence. Man's psychic world constitutes but a stage in the evolution of living creatures. He occupies the higher rung on the ladder of psychic development, as "a social and historical being", elevated to that rung "by the social mode of life and historical progress". Succession in the psychic life of animals is explained only by the physiological heredity of their organic type, while a "historical", "social" man typifies a new factor of succession—tradition in the broadest sense of the word, transmission from one generation to the next of the entire aggregate of the achieved culture through language, imitation, education, etc. "All our thoughts and feelings, all our views and desires, all habits and inclinations, the entire structure of our personality in general prove to be the same social and historical product as language. Traditions in language, mores and morals, art, science and religion enrich our soul with the colossal wealth of humanity's past experience to which every particular individual only adds but a minute particle of that which is really his own. The soul of human personality is ninety-nine per cent a product of history and sociality." Thus we can see that, though he does not recognise man's mental life as something extraordinary and calls his psychology biological, Lange does not share a vulgar-biological view and stresses man's social essence.

The mental life of every individual person is composed of a number of subjective emotional experiences. However, at the same time, it is a real life process, introducing changes into motive responses. Lange thought that this process develops as a "specific way of an organism's adaptation to the medium", which aids him in the struggle for existence and is

"undergoing selection and evolution in conformity with this biological usefulness". In this sense, it is similar to other organic processes—nutrition and metabolism, blood circulation, and growth—and is connected to them by a regular linkage. The complexity of psychic life depends on the complexity of the physical organisation of animals of a particular species. "One and the same world surrounding animal organisms is specifically reflected in the consciousness of each in accordance with the development level and complexity of the organisation of this particular animal species. Thus, mental life in general takes place in an infinite number of patterns of the common world, typical of animal creatures belonging to different orders."[1] Lange calls this view of psychic life objective.

Lange held that combination of the subjective and objective points of view are a necessary postulate of psychology, since without subjective emotional experiences we would not have any notion of psychic life, and without an objective assessment of those experiences we would not have psychology as a science. "Subjectively the whole world exists for me in my consciousness. Objectively, my consciousness, like that of other creatures, is but an individual fact in the common real world, spatially included within the limits of a corresponding organism... Subjectively the consciousness of an individual is for him a condition indispensable for the existence of the entire world as a phenomenon for him. Objectively, for a psychologist, this consciousness is only one of the factors in the life of the given organism, which exerts some impact on the world in general, though to a limited degree."[2]

As a representative of the natural-scientific trend in psychology, Lange criticised various spiritualistic and dualistic

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[1] N. N. Lange, "Psychology", *Scientific Results*, Vol. VIII, 1914, pp. 12-28.

[2] *Ibid.*, p. 29.

theories of man's mental life, but he was himself prone to dualism in his constructs of a positive programme.

Lange occupied a materialist position on the chief question of philosophy; he recognised that matter is primary and existed prior to the emergence of consciousness. "Biological psychology," he wrote, "in regarding consciousness as a function of animal organisms, necessarily supposes there was a time when no organisms and no consciousness existed. Thus it assumes that consciousness emerged at a certain moment in the history of the physical world. The physical world is for psychology not only a fact of consciousness, but, on the contrary, consciousness is a fact that has emerged in the physical world. Recognition of the existence of a real physical world independent of consciousness is an indispensable postulate of the science of psychology."

Lange counterposed his own understanding of the relation of the psychic to the physical to an "idealist construction of psychology" in the works of the subjective idealists Mach and Avenarius and neo-Kantian Paul Gerhard Natorp. Stating that Machism essentially signifies a return to subjective idealism, Lange emphasised that it is unacceptable both for psychology and physics. He noted: "Mach's elements are in reality our sensations of flowers, sounds, etc., i.e., Mach in fact goes back to the subjective idealism of John Stuart Mill, David Hume, and others. Our experience and its composition are identified with the real world, this real world is transformed into its representation, and the being of objects coincides with its perception. When the reality of the physical world is thus crossed out, monistic idealism emerges, of course, and the difficult problem of a really existing correlation between the physical and the psychic turns into a relatively simple question concerning the link between the notions of the physical and those of the psychic within the bounds of experience or consciousness."[1]

[1] N. N. Lange, "Psychology", pp. 32-81.

Lenin provided an exhaustive criticism of Machism as a variety of subjective idealism and revealed the degree to which it harmed the progress of science in his *Materialism and Empirio-Criticism*. The proximity of Lange's argumentation to the ideas Lenin presented in this book is quite evident. It would be difficult to imagine that Lange independently arrived at the same conclusions as Lenin. It is much more likely that he was influenced by Lenin's ideas. He could have easily acquainted himself with Lenin's work after he learned of it from reviews in the journals *Kriticheskoye obozreniye* (A Critical Review), *Sovremenny mir* (Contemporary World) and *Russkiye vedomosti* (The Russian Gazette). It is noteworthy that a handwritten note was discovered in Lange's archive (by David Elkin) with short biographical information on Lenin and a list of his major works. Against the title of *Materialism and Empirio-Criticism,* there is a notation in Lange's handwriting: *Nota bene.* At the very least, this infers the possibility of Lenin's ideas having an impact on Lange's views.[1]

We believe Lange passed through a considerable philosophical evolution in his views which was consummated in his "Phychology". We cite these facts to support our contention. Lange's unpublished letters of 1890 reveal his initially positive attitude towards Avenarius's empirio-criticism, in which he was inclined to see a correct solution to the psychophysical problem. In 1907, Lange espoused the principle of psychophysical parallelism. In 1914, he sharply criticised this principle from positions of materialist natural science. It is known that at that period Lange did not publish any experimental results, though before that he did so regularly. It can be assumed that that period was for Lange but a stage in a serious theoretical interpretation of the accumulated psychological material. A definite shift in Lange's views concerning fundamental psychological problems evidently

[1] D. G. Elkin, "N. N. Lange and I. M. Sechenov", *Notes of Odessa University,* XXVII, Issue I (52), Odessa, 1948.

took place sometime between 1909 and 1914. In his report to the Second All-Russia Congress on Pedagogical Psychology (1909) and in his sharp polemical attacks on Chelpanov we still do not see any traces of new ideas, though Chelpanov's support of Machism and his report at the Congress provided grounds for that. The essence of the changes that occurred in Lange's methodological position, however, cannot alone be reduced to criticism of Machism.

Idealist psychology recognised self-observation as the basic means of studying mental life. The very act of raising the problem of self-observation as a method applied in psychology, stemmed from the introspective conception of consciousness shared by idealistically-orientated scholars. In Chelpanov's report at the Congress in 1909 it was stressed that self-observation underlied experimental and so-called objective study of psychic phenomena. In his criticism of Chelpanov's view of the problem of self-observation, Lange did not go then beyond just noting the quite complex character of self-observation as compared to experiment. But in his "Psychology" Lange already occupied an entirely different position.

His protest against the introspective conception of the psyche is reflected in a critical review of the position of Paul Natorp, a member of the right wing of the German Social Democratic Party, who represented a neo-Kantian opposition to Marxism in philosophy, psychology and pedagogics. Lange regarded Natorp's views as typical of the idealist interpretation of psychology and opposed to "our realistic or biological view of its tasks". Lange noted that subjective emotional experiences were not the subject-matter of psychology as such, and not within the scope of the individual who goes through these experiences. They are such only for another subject who is observing that individual. Thus, this constitutes the point from which destruction of the introspective conception of consciousness begins. Discussion, investigation, psychological assessment, and objective study—all "do not take place within the scope of consciousness of the individual going through an emotional experience, but out-

side it—in the thoughts of the psychologist". For the psychologist observing a subject's emotional experiences, "they are included in the real world, occupy their own spatial place (in the organism) and their own objective temporal moment, and thus are found to be involved in the causal connection with events in the real world as one of its particles".

In addition, Lange firmly rejects an introspective approach to the study of the psychic. "Idealism reduces the task of psychology to just an analysis of the contents of a given consciousness within the limits of this particular consciousness. His entire mental life consists only in what the subject himself realises in his emotional experiences, and only to the extent to which he realises it."[1] Hence consciousness is transformed from an object of study into a condition, a principle of psychology. Such a "flat view" of psychic life, in Lange's view, is unacceptable. In its causal and genetic explanations of psychic life, Lange emphasises, psychology cannot be satisfied only with what the studied subject himself realises, i.e., what he himself discerns in his emotional experiences. Lange's idea of the importance of the data obtained through self-observation considerably supercedes the vulgar negation of the latter by various schools of behavioural psychology and of the introspectionism of idealist psychology: "Subjective emotions are only the material for psychology, which it must explain in psychological terms, but which does not contain such an explanation in itself." In the majority of cases, Lange remarks, the person being tested cannot even take into consideration the actual composition of his emotions: the origin and nature of his will and feelings, the meaning of the words he pronounces, his relationships with other individuals, the processes of memory and thinking. He repeatedly turns to this estimate of data produced through self-observation: "Subjectively, mental life consists in emotional experiences themselves, but objectively, for a phychologist, it manifests a certain real structure, representing particular processes and laws of development about which the

[1] N. N. Lange, *op. cit.*, p. 33.

subject of the emotions himself may have no notion."[1]

The critical assessment of self-observation presented in Lange's book has little in common with the trite arguments "limiting" the possibilities of self-observation in the spirit of the positivist theses of Auguste Comte. Chelpanov was mistaken, as we have already noted, in thinking that if the past dispute between Sechenov and Kavelin concerning self-observation took place at present, representatives of contemporary science would resolve it in favour of idealist Kavelin (this was stated in Chelpanov's book *The Brain and the Soul*). His assertion is belied by Lange's views, and Lange was regarded as a great authority by Russian psychologists. He outlined the fundamentally important lines of grappling with this difficult problem, which would not be easy at that time were he not aware of the critique of subjective idealism in Lenin's *Materialism and Empirio-Criticism*.

Thus we can see from an analysis of criticisms of idealist psychology that as a result of historical conditions at that time the possibility of Lenin's works exerting a direct, even though limited, influence upon some progressively-minded psychologists and, through them, upon Russia's pre-revolutionary psychological thinking, cannot be denied. This fact, however, by no means diminishes the role and importance of the works of Konstantin Kornilov and other Soviet psychologists in 1923 and 1924 as they sought to introduce Marxism into psychology, clearly and unequivocally presenting the need to develop Marxist psychology. In his time, Lange did not, and could not, pose such a task.

Of course, Lange's "real psychology" constituted a progressive psychological system, permeated by materialist traditions and developing in the context of the natural-scientific trend of psychology. While giving him his due, we cannot disregard the fundamental shortcomings typical of "real psychology". Lange was far from striving to base his "biological psychology" on dialectical materialism. He also failed to discard certain

[1] N. N. Lange, "Psychology", p. 29.

positivist propositions, which led to agnosticism. In fact, that could only be achieved on the basis of Lenin's theory of reflection. Presenting his materialist views opposed to the introspective conception of consciousness, Lange stated quite in the spirit of positivism: "We don't know what is the essence of spiritual life; by the way, this also can be said of the essence of physical phenomena." The concepts of the subjective and the objective are interpreted by Lange as certain categories treated in pragmatical terms: "...And these latter notions [of the subjective and the objective.—*A.P.*], like other fundamental scientific categories, are constructed and adopted only according to their correspondence to, or usefulness for, the substantiation of science (in this particular case, of psychology), while not possessing immediate self-evidence in themselves." He vigorously criticises the conception of psychophysical parallelism, but himself returns to the dualist positions of the "theory of interaction". Lange's positivist, agnostic and other similar propositions contained in his works, reveal the limited character of his natural-scientific materialism. Alongside his materialist positions, his works contain ideas uncritically borrowed from various philosophical schools, which contradict the former in principle.

The psychophysical problem constituted a probing-stone for psychologists belonging to all trends, including the natural-scientific, over the entire pre-revolutionary period of the development of psychology in Russia.

Each of the trends we have analysed had its own fate. Metaphysical psychology went out of existence together with the social system that constituted its source and support. Empirical psychology left its imprint only in a few positive facts and results of investigations, and a heavy burden of serious errors which Soviet psychologists had to devote years to overcome. The fate of natural-scientific psychology was quite different. Sechenov's theory runs through the history of the Soviet science of psychology and accounts for many of its achievements. In 1927, for example, Kornilov wrote, as he considered the prospects of the development of psychology

in the USSR, that Soviet psychologists regarded the physiology of higher nervous activity "as the closest of associates" engaged in fathoming physiological mechanisms of mental activity, which comprise a field vastly important for psychology. The natural-scientific trend, however, by itself could not overcome the crisis, in which the science of psychology had landed. Only the restructuring of psychology on the basis of dialectical materialism could lead psychology in Russia out of the crisis which even today afflicts the science of psychology in the West. It was only Lenin's theory of reflection that could provide a sound philosophical base for the fruitful development of both psychological theory and practice.

The revolution in the very foundations of psychology as a result of introduction of Marxist theory did not occur at once. However, once it took place it determined, for many years to come, the prospects and contents of that particular branch of human knowledge. Materialist traditions typical of the natural-scientific trend made it easier for Soviet psychology to imbibe the ideas of Marxism-Leninism and to create the groundwork for a genuinely Marxist-Leninist science of psychology.

Chapter Three

PSYCHOLOGY AFTER THE OCTOBER REVOLUTION

In the first few years after the Great October Socialist Revolution, science found itself in an unfavourable situation. Economic and social dislocation resulting from the First World War and Civil War, hunger and all kind of shortages could not, it seemed, facilitate the development of scientific knowledge. However, supported by the people, the state, and the government, scholars were provided an opportunity to participate in great projects undertaken by the Soviet state. Rehabilitation of the economy, developing education and large-scale scientific and technical tasks became priorities in the first few months after the revolution. In April 1918, when the country's situation was grave indeed, Lenin outlined his Draft Plan of Scientific and Technical Work which mapped out a clear course of broad scientific development linked with production. Enthusiastic response of scientists to the appeal of the Soviet state was explained by the change which occurred in the relations between science and society in the post-revolutionary period. The most plausible explanation of the phenomenon was provided by Lenin: "In the old days, human genius, the brain of man, created only to give some the benefits of technology and culture, and to deprive others of the most essential—education and development. From now on, all the marvels of science and the gains of culture belong to the nation as a whole, and never again will man's brain and human genius be used for oppression and exploitation."[1]

[1] V I. Lenin, "Third All-Russia Congress of Soviets of Workers', Soldiers' and Peasants' Deputies", *Collected Works*, Vol. 26, 1977, p. 481.

Many scientists, among them those who politically did not agree with the Marxist outlook, actively participated in creative work for the benefit of the people.

Russian psychologists also were among those scholars who promoted the development of young Soviet science. Bekhterev, one of the leading representatives of the science of psychology, linked his life with the young Soviet Republic from the first days of the revolution. He wrote in 1919: "One cannot stand at the crossroads at the turn of history and just wait—one needs to display a will to activity, construction and creativity; we the workers of science, who have always given all our powers to the service of mankind, must not vacillate. We must firmly decide whether we will go with the people who has won power for itself, wishes to build its future and calls on us to take part in this construction. Can one doubt the answer? We must therefore strive to reduce as much as possible the time of dislocation by giving the sum-total of our knowledge and all our skills for creative activity to improve the country's situation and for the benefit of the people."[1]

Wagner, Ivanovsky, Lange, Nechayev, Rossolimo, Rubinstein, Chelpanov and many others began to work in scientific psychological institutions. Young scientists, among them Pavel Blonsky, N. F. Dobrynin, Konstantin Kornilov, Natalia Levitova, Nikolai Rybnikov, P. A. Rudik, Anatoly Smirnov, V. Ye. Smirnov, N. P. Ferster, G. A. Fortunatov, Pyotr Shevarev (in Moscow); Mikhail Bassov, Alexander Boltunov, Adrian Griboyedov, Vladimir Myasishchev, Polina Efrussi (in Petrograd); and Dmitry Uznadze (in Tiflis, now Tbilisi), were outstanding in research and pedagogical work in the early years of Soviet power.

The activity of Blonsky, who was one of the most eminent figures in the history of Soviet psychology, clearly testifies to

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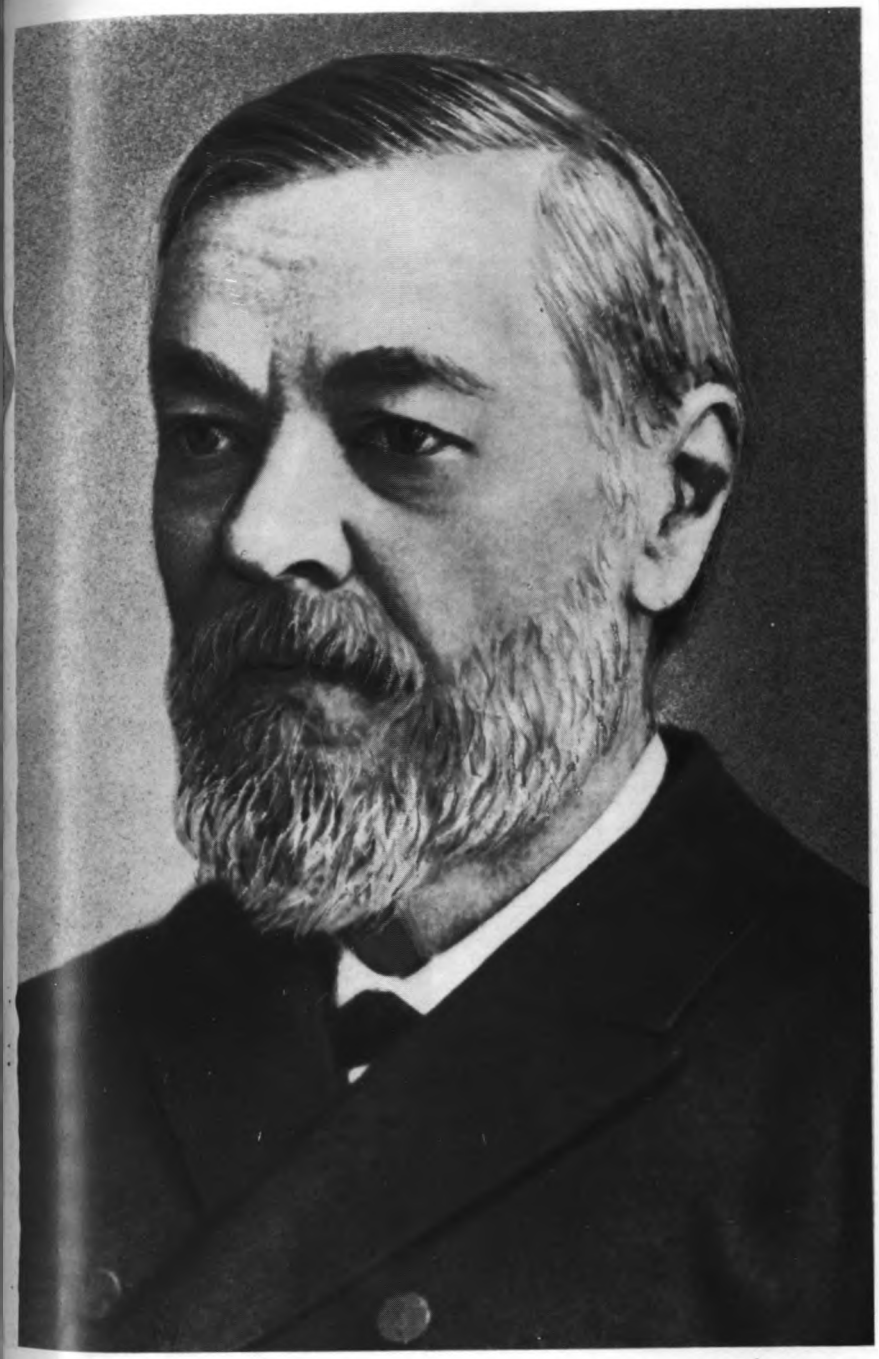
[1] V. M. Bekhterev, "The Major Tasks of the Reflexology of Physical Labour", *Voprosy izucheniya i vospitaniya lichnosti*, No. 1, 1919, p. 51.



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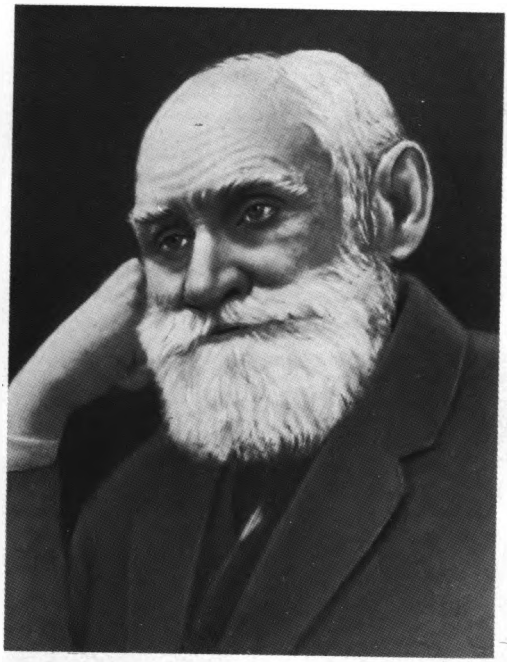

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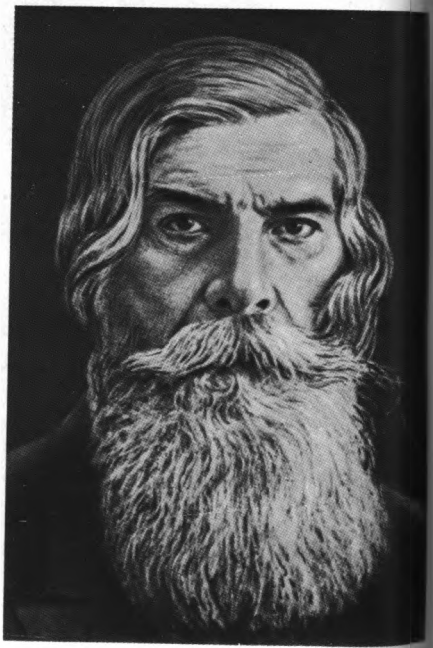

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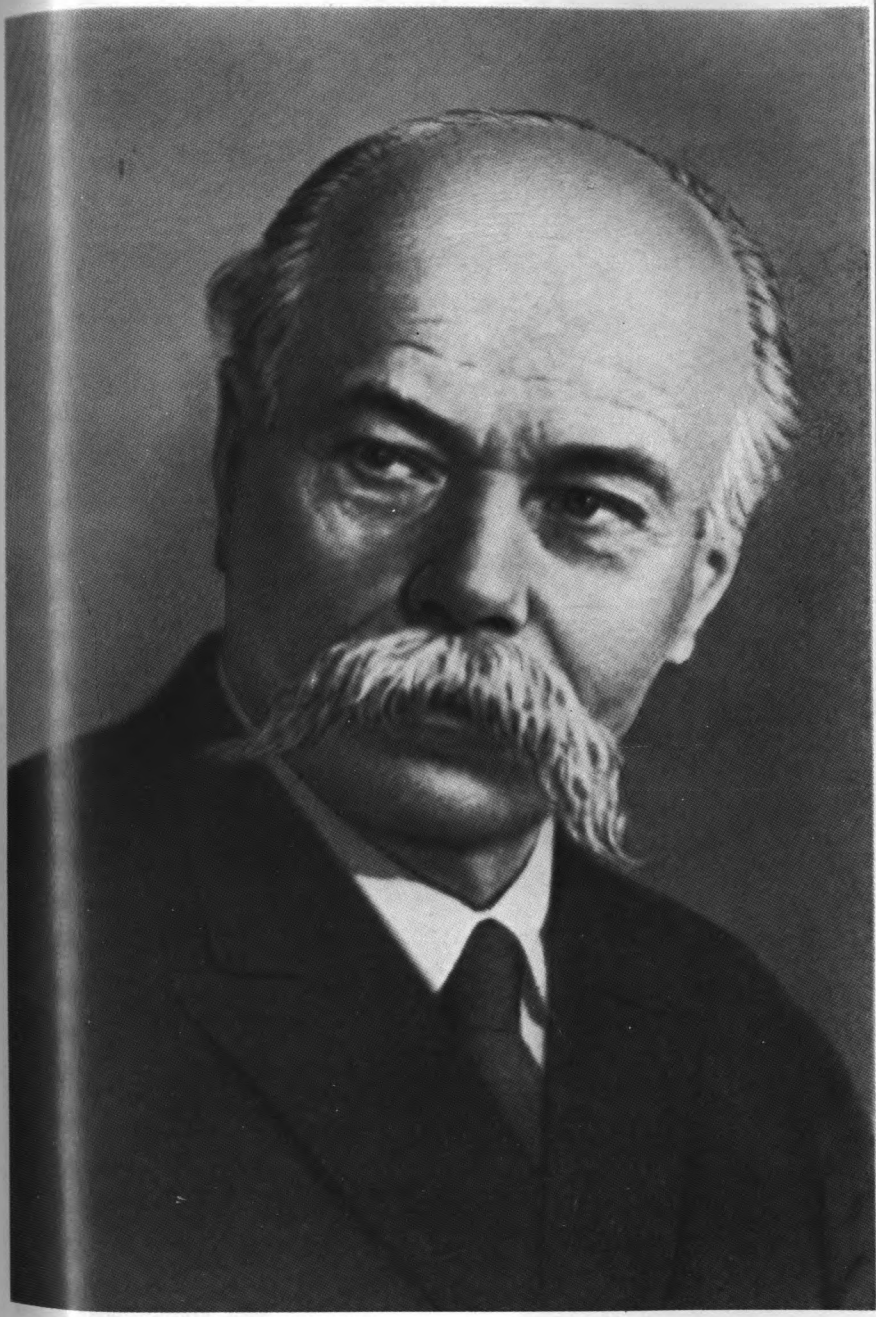

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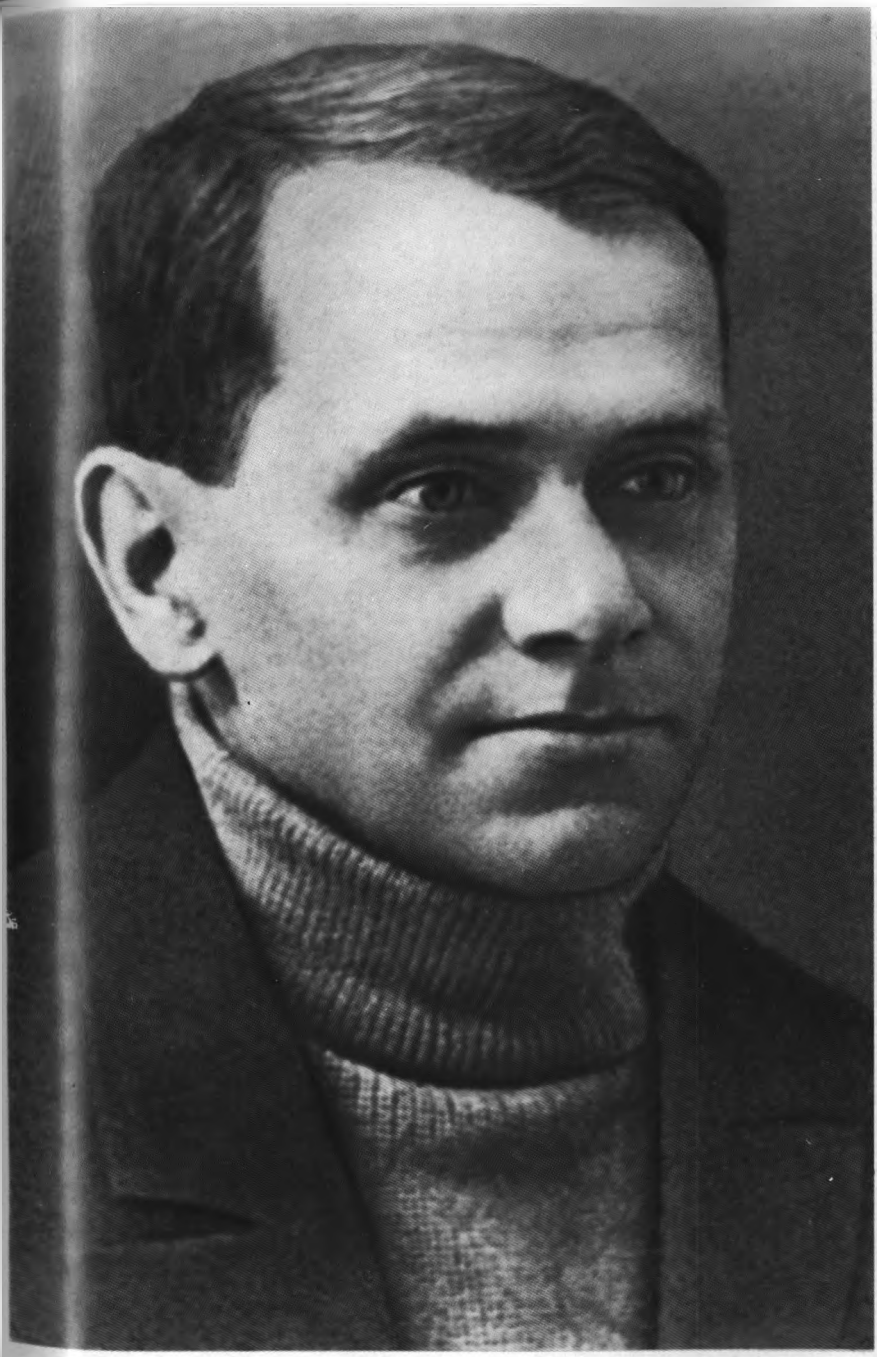
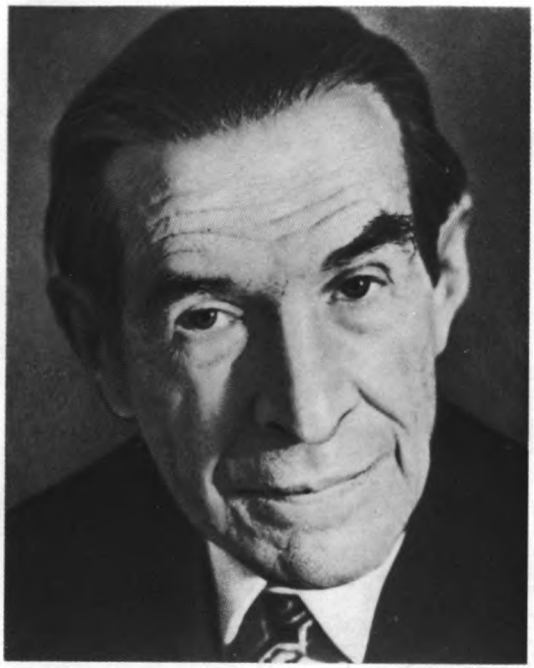


Pavel Blonsky

Nadezhda Krupskaya

Anton Makarenko



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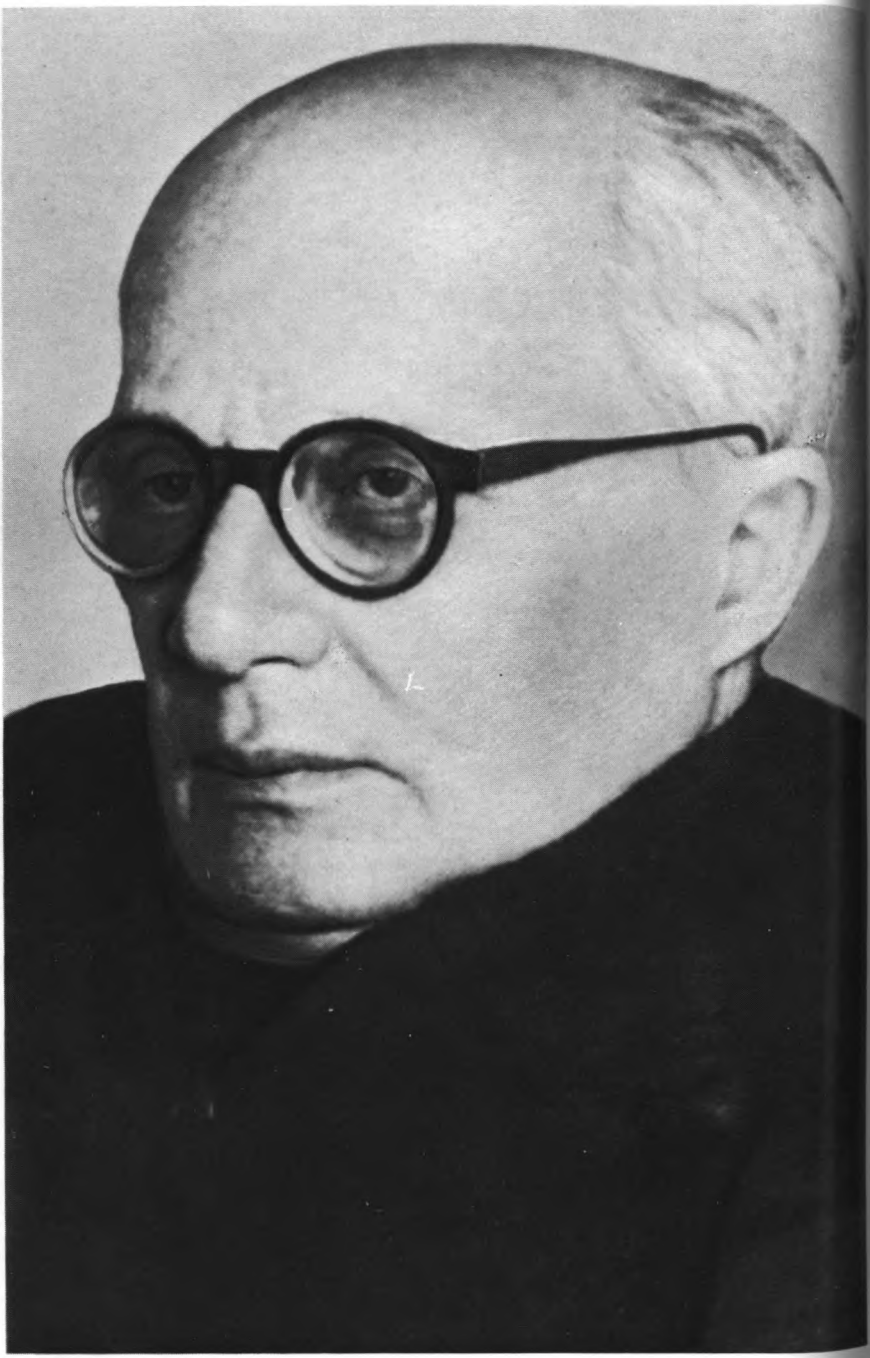

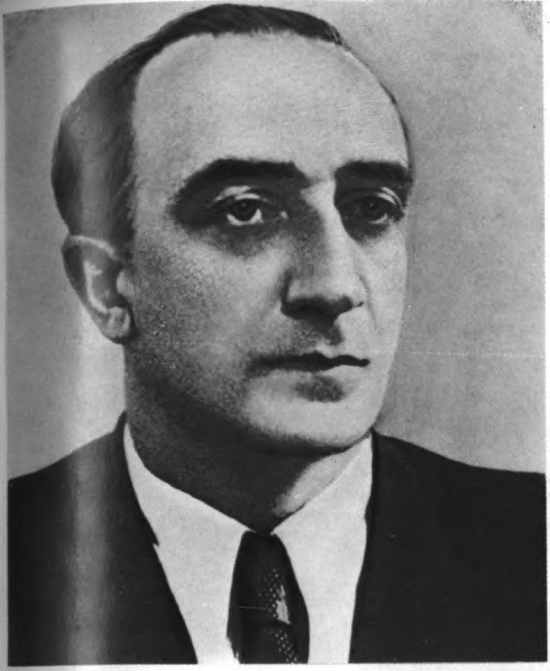

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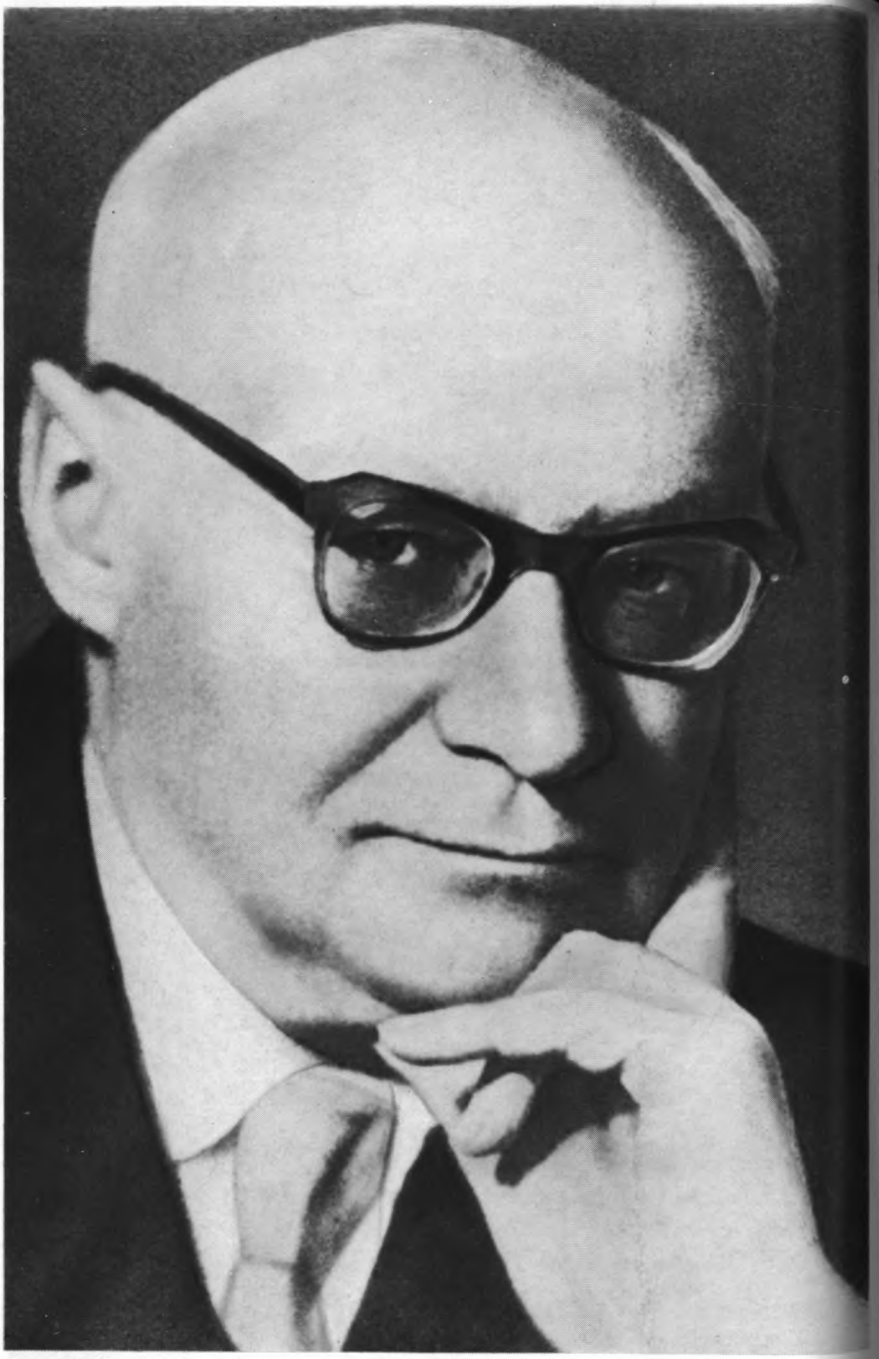

Anatoly Smirnov

the deep changes which occurred in the consciousness of the scientific community as a result of the October Revolution. His works on psychological problems reflect the epoch of revolutionary transformations in the field of psychology and pedagogics. They were full of bold ideas, persistent quests and sharp contradictions.

Blonsky greeted the October Revolution from the very start and at once began to work under Soviet power. He recalls in his *Autobiography*: "I was carried away by the revolutionary destruction of capitalist society in general, and in particular the destruction of old pedagogy... I consider myself exceptionally lucky that I lived in the epoch of the October Revolution. Such epochs make one ponder over everything, they put everything into question and expose the most secret foundations."[1] In the course of establishing a labour school, Blonsky came to the conclusion that the problem of education could not be considered in isolation from science. This became for him a reference point for the revolutionary destruction of the entire old philosophy and psychology, neither of which corresponded to the demands he made on them in his creative activity.

In 1920, Blonsky published his *Reform of the Science*, which is a fine document of that period. In it he deals with philosophical idealism, which, according to him, is "an outright atavism of thought" and is "fully in contradiction with ordinary common sense". Discarding the atavism of thought as contemporary idealist philosophy, Blonsky regards idealist psychology, connected with it, as a "mythological science" and urges the radical modification of psychology.

Blonsky expressed his dissatisfaction with the state of psychology as a science still prior to the October Revolution. He noted in his *Autobiography*: "Traditional university psychology proved to be different from psychology as I saw it.

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[1] P. P. Blonsky, *Selected Pedagogical and Psychological Works* in two volumes, Vol. 1, Moscow, 1979, pp. 35-36 (in Russian).

I wished psychology to teach me to understand the nature and behaviour of people, but I did not then know that no exploiting society would stand for such a psychology since it is not in its interest that the nature and behaviour of exploiters and their accomplices be understood by all. Thus, instead of what I expected, I came upon discourses, of little interest to me, on the spiritual substance, psychic causality, etc."[1] After the October Revolution, this vague feeling of dissatisfaction turned into a deep conviction that "modern psychology is vividly non-scientific psychology" and that "it needs radical restructuring". "Our scholarly psychologists are in fact people who are very far from correctly understanding human behaviour, and their writings are all distortions of reality. Seen from this angle, contemporary psychology is a grandiose attempt at presenting people with a false interpretation of human behaviour in order to befog their consciousness and put a brake on it."[2]

Blonsky firmly joined the camp of natural-scientific psychology, striving to transform psychology on the principles of objectivism which was close to the conception of objective psychology (the later terms for it are psychoreflexology and reflexology) formulated by Bekhterev. In his *Reform of the Science*, Blonsky describes the way he understands the subject-matter of psychology: "Scientific psychology is a science of the behaviour of man, i.e., of his movements as the functions of certain variables", and "psychology as a science of the behaviour of living organisms is a biological science".[3] As we can see, even the most progressive psychologists, among whom Blonsky should by all means be counted, did not yet see concrete ways of restructuring psychology on the principles of dialectical materialism. Blonsky was the first among the psychologists to note that "scientific psychology is oriented

[1] P. P. Blonsky, *Selected Pedagogical and Psychological Works*, p. 31.

[2] P. P. Blonsky, *Reform of the Science*, Moscow, 1920, p. 30 (in Russian).

[3] *Ibid.*, p. 34.

on Marxism",[1] but he did not clearly formulate the task of reconstructing psychology on the basis of Marxism.

In 1921, Blonsky published *An Outline of Scientific Psychology*, a book in which he developed ideas he had formulated in the condensed form of theses in his *Reform of the Science*. In his new book, he confirmed the principles of "behavioural" ("objective") psychology which became the leading principles in the first post-revolutionary period of Soviet psychology. "Psychology is a science of the behaviour of living beings," Blonsky emphasises. "Scientific psychology studies the movements, actions, in general, the behaviour of the living being in their functional dependence on various conditions."[2] The book contains a number of ideas which were progressive for that time and deals with a wide range of questions. Blonsky expatiates on the subject-matter of scientific psychology, describes its methods, provides a general characterisation of the behaviour of living beings and man, examines the socio-economic basis of human behaviour, the forms of instinctive-emotional and reasonable behaviour.

Blonsky formulated his fundamental propositions still in the *Reform of the Science*, such as "Scientific psychology is social psychology" and "Man is *Homo technicus*"[3]; human behaviour, taken generally, "cannot be any other than social"[4]; and "From the genetical point of view, when we compare human activity with that of other animals, we may characterise it as the activity of an animal who utilises implements. Man is *Homo technicus* and *Homo sociales*. This provides us with the key to human behaviour: it is the technological activity of human society. Social production is the foundation on which the behaviour of mankind is based. By

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[1] *Ibid.*, p. 30.

[2] P. P. Blonsky, *An Outline of Scientific Psychology*, Moscow, 1921, p. 14 (in Russian).

[3] P. P. Blonsky, *Reform of the Science*, p. 34.

[4] *Ibid.*, p. 30.

recognising that we adopt the Marxist point of view as a solely scientific one."[1]

Blonsky critically regarded the view that man is an unchangeable being who can be described in only his present state. That was an error typical of traditional idealistic psychology, he said. "Human behaviour is a changeable phenomenon, and the task of scientific psychology is to establish in what way and depending on which conditions it changes, what and how an influence is exerted upon it."[2] In addition, he showed that human behaviour becomes much more clear if it is considered within the framework of social rather than individual life. An individual's behaviour is but a function of the behaviour of the surrounding society. But society is not a rigid, invariable phenomenon, it changes with time. Therefore social behaviour, in turn, should be studied as a function of time, in genetic, dynamic terms, as a process, i.e., in its historical development. "Thus," Blonsky concludes, "scientific psychology is first of all genetic psychology."[3]

Blonsky's interpretation of the subject-matter of psychology (psychology as a science of behaviour) was close to reflexology, behaviourism and in particular to the views held by a group of young British psychologists united in the Plebs League (Leander Jameson and others) and was far removed from dialectical materialism. However, his activity in that period was as a whole progressive. His works constituted the source from which the Soviet science of psychology of the 1920s drew ideas and orientations linked with the introduction of a materialist approach to psychic phenomena and the use of objective methods of research. Psychologists were impressed by Blonsky's wish to rely on the principles ensuing from a genetic, historical approach to human behaviour, and by his efforts to draw psychology into a closer contact with life, the practical reconstruction of society, etc. Together with

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[1] P. P. Blonsky, *Reform of the Science*, p. 31.

[2] P. P. Blonsky, *An Outline of Scientific Psychology*, p. 12.

[3] *Ibid.*, p. 13.

Kornilov, Vygotsky and other progressively-minded scholars, Blonsky was a reformer of the Soviet science of psychology in the difficult period it was going through, when the question was being decided whether it will remain a "mythological science" or will firmly break off its ties with the traditions of idealism and metaphysics which at that stage still substantially influenced the activities and thinking of psychologists.

The path Blonsky followed in science, his efforts to cooperate with the Soviet state, and even the mistakes he committed in his creative work were as a whole typical of the contingent of young scientists who set out to build a new science of psychology immediately after the victory of the October Revolution.

One of the primary tasks faced by Soviet psychologists was to participate in the radical restructuring of the Soviet Republic's educational system. The Great October Socialist Revolution opened the way to fundamental social changes. Revolutionary creativity and quests for the new dominated all spheres of life without exception. The school, education and upbringing of man in the epoch of revolution were central points in the desperate search for new methods and forms of pedagogical and psychological work. From the first few months of the victory of the October Revolution, psychologists were actively engaged in pedagogical research.

As a result of its practical application in education and upbringing, psychology was included into the orbit of pedagogical sciences and firmly took its place among them as a scientific discipline underlying pedagogy.

Another area of psychology took human labour as its subject of investigation. Lenin noted in "The Immediate Tasks of the Soviet Government": "In every socialist revolution, after the proletariat has solved the problem of capturing power, and to the extent that the task of expropriating the expropriators and suppressing their resistance has been carried out in the main, there necessarily comes to the forefront the fundamental task of creating a social system superior to capi-

talism, namely, raising the productivity of labour, and in this connection (and for this purpose) securing better organisation of labour."[1] And further on: "The task that the Soviet government must set the people in all its scope is—to learn to work."[2]

The work of Soviet psychologists in the sphere of productive psychotechniques and psychophysiology of labour, implemented at that time mostly within the framework of the movement for the scientific organisation of labour, in fact amounted to translating into practice the guidelines indicated by Lenin. Scientific research into psychology of labour began in the Russian Soviet Federative Socialist Republic with the study of methods for determining professional fitness applied abroad. Many of these methods were severely criticised. However, a series of questions were raised on the theoretical and practical plane in connection with the chief problem—that of the symptomatic and prognostic value of psychotechnical tests in general: the possibility to develop certain indispensable professional qualities through exercise, the link between the intellect and fitness for certain professions, the correlation between the inborn and acquired traits. Problems involved in professiography, selection of representatives of various professional groups and investigations of fatigue and the value of exercise were elaborated in many psychotechnical works by Soviet psychologists.

Leaving aside the analysis of the actual value of the great volume of research work in the sphere of pedagogical psychology and psychotechniques which was carried out in the first few years of the Soviet state, one very important circumstance should be emphasised: psychology was predominantly a philosophical science before the October Revolution, which set itself the goal of establishing the laws of the "spiritual world" that was far removed from everything material. Applied psychology held a subordinate position and was

[1] V. I. Lenin, "The Immediate Tasks of the Soviet Government", *Collected Works*, Vol. 27, 1977, p. 257.

[2] *Ibid.*, p. 259.

considered a secondary branch of psychological knowledge. The situation radically changed after the October Revolution: applied psychology moved to the fore, and psychological knowledge was put to practical uses. Soviet psychologists began carrying out the "social order" of the new epoch by tackling issues of great social value for the young Soviet Republic. The social value of scientific-theoretical and scientific-practical studies became central to all scientific activity, including in the sphere of psychology.

The shrine of "pure science" was dismantled and psychology came out from the stifling atmosphere of academism and scholasticism into the fresh air of revolutionary transformation of the life of working people. Its theoretical foundations also had to be changed. Progressively-minded psychologists realised soon after the October Revolution that old metaphysical psychology, predominating in the official science of tsarist Russia, had completely outlived itself. Blonsky reflected the actual situation in his *Reform of the Science*. In his typical publicist manner, he characterized old psychology as "archaic", "atavistic" and "mythological", referring in this way not only to speculative metaphysical psychology, but also the empirical psychology prevailing in the recent past.

However, though they felt the need for radical reform in psychology and could even imagine the general thrust of that reform and reorientation of the science of psychology towards materialism, in the first few post-revolutionary years (1917-1922), the most progressively-minded scholars did not see any concrete way for the actual restructuring of their discipline and could not raise the issue. As a result, a situation arose in which old speculative psychology had lost its dominating positions together with the collapse of the state system and social structure in which it found its mainstay and support, but a new system of views on the subject-matter and tasks of psychology were only in the making and just vaguely discernible, and therefore did not present a real force on the arena of ideological struggle. Only a regrouping of forces in psychology could save the situation.

When speculative psychology lost its influence and was ousted, its right wing was saturated with empirical psychology, which increased resistance to materialism by employing more subtle ways in the theoretical struggle than open propaganda of spiritualism typical of its predecessor. Characteristic in this respect was Chelpanov's shifting of his position: before the revolution, he combined the features of a metaphysical psychologist and a psychologist-empiricist, and now he firmly sided with empirical psychology (we will deal with this later). The natural-scientific trend won over and set about implementation of the programme for developing the science of psychology which appeared in its individual schools prior to the October Revolution.

The natural-scientific trend, which was not monolithic even before the revolution, now became still more heterogeneous and contradictory. Though it retained the most valuable features of the past period—its protest against subjectivism and idealism, as well as the demand for objective methods of investigation in psychology, this trend nevertheless did not differ fundamentally from other objectivist trends in European and U.S. psychology, in spite of the revolutionary phraseology of some of its representatives. The majority of schools in objective psychology had close ties with behaviourism.

Bekhterev wrote in his commentary on Pitirim Sorokin's article describing the state of U.S. behaviourism: "The readers who are acquainted with Russian literature on reflexology, will find that in their above-described views U.S. scholars are fully consonant with representatives of the Russian school of reflexology."[1]

The chief idea, to which the content of many systems of objective psychology at that time was subordinated, is as follows: psychology can be defined as a science of the behaviour of living beings. Thus, the trend which became the leading one in the first few post-revolutionary years was

[1] P Sorokin, "The State of Psychology in America over the Recent Period (1914-1918)", *Voprosy izucheniya i vospitaniya lichnosti,* Nos. 4-5, 1922, p. 598.

firmly established. Later, we shall refer to it as behavioural (or objective) psychology.

Taking the lead in the science of psychology, the objective trends received an opportunity to extend psychology's ties with the related branches of natural science, from which old subjective psychology was barred because of the exclusive nature of the psychological method, which was predominantly introspective. Soon after the victory of the October Revolution, Soviet psychology began to display increased interest in natural science and to actively interact with it. Two tendencies clearly stand out among these creative links. First, the wish to clarify the essence of the physiological foundations of mental activity (hence an interest in the works by Pavlov, Vvedensky and Alexei Ukhtomsky), as well as of its physicochemical basis (Lazarev's ionic theory of excitation). And second, the tendency to include in psychology the entire set of Darwin's evolutionary ideas (Alexei Severtsov, Wagner). Both these tendencies can be traced throughout the history of Soviet psychology.

In 1922 and 1923, a number of works appeared, in which these tendencies were clearly reflected. Among them, a prominent place was occupied by Pavlov's book, *The Twenty-Year Experience of an Objective Study of Higher Nervous Activity (Behaviour) of Animals* (1923), Ukhtomsky's article, "The Dominant as a Working Principle of the Nerve Centres" (1923), and booklets by Lazarev, *Physicochemical Foundations of Higher Nervous Activity* (1922), Severtsov, *Evolution and the Psyche* (1922), and Wagner, *Biopsychology and Contiguous Sciences* (1923). All these works differ greatly as to their approach to the goals of psychological investigation, general methodological guidelines and the reaction to them among the public and the scientific community. However, they have something in common: all of these works were aimed at bringing natural sciences closer to psychology, so that natural sciences (psysiology, biology, physics and chemistry) formed a solid foundation for psychology. It is not by chance that in all of the five works there are references to Sechenov. In

spite of the fact that only Wagner was a psychologist, each of these works became a real event in the science of psychology, whose importance went far beyond the limits of the period under consideration.

The extraordinary role played by Pavlov's *The Twenty-Year Experience of an Objective Study of Higher Nervous Activity (Behaviour) of Animals* for the development of psychology, physiology and psychiatry is common knowledge. The book constituted the peak of knowledge which could at that time be provided by research into the physiology of the cerebral hemispheres for the interpretation of nerve mechanisms involved in mental activity. Psychology received a wealth of ideas, material and illustrations concerning the materialist theory of the activity of the cerebral cortex. Subsequently, no serious researcher in psychology could do without references to the classic works of the great physiologist, and without efforts to determine his attitude to Pavlov's doctrine as a whole or to its certain aspects.

The above-mentioned article by Ukhtomsky,[1] as well as investigations by his associates, are closely related to Pavlov's works. Proceeding from the idea formulated by Vvedensky[2] and Pavlov, Ukhtomsky advanced the principle of the dominant, interpreting the latter as the "dominating source of excitation, which to a large extent predetermines the nature of the centres' current responses at the given moment". The "stationary work or the working posture of the organism" was regarded as the dominant's external form. Ukhtomsky thought that the principle of the dominant provides the "physiological foundation for the act of attention and object-related thinking". He saw the "inertia of the dominating excitation" (i.e., the "dominant of the experienced moment") as

[1] A. A. Ukhtomsky, "The Dominant as a Working Principle of the Nerve Centres", *I. M. Sechenov Russian Physiological Journal,* Vol. VI, 1923.

[2] Ukhtomsky himself emphasised that the principle of the dominant largely originated from the "ideological and factual heritage" left by Vvedensky.

the source of "bias", "fixed images" and "hallucinations". In the opinion of Ukhtomsky, any "notion" and "concept", any individualised psychic matter at our disposal or which we can arouse in ourselves, is but a reflection of the dominant which has been experienced some time in the past.

The works of Pavlov and Ukhtomsky contained a set of problems which had to be tackled jointly by psychologists and physiologists, and first of all the problem of correlation between diverse psychic states and the physiological field of dynamic neuro-cerebral processes. The problem of the physiological sources of mental processes was thus transferred to a solid scientific foundation and was included into the Soviet science of psychology as one of substantial importance. Illustrative in this respect is Kornilov's *Textbook of Psychology Rendered from the Point of View of Dialectical Materialism* (1925), in which five main principles of the activity of cerebral hemispheres are indicated: 1) the principle of association or forming conditioned reflexes; 2) the principle of irradiation and concentration of excitation established by Pavlov's school; 3) the principle of prevailing, dominating excitation ("the dominant") or the best "optimal" excitation (this principle, Kornilov stressed, was established almost simultaneously by Pavlov and Ukhtomsky); 4) the principle of blazing the paths; and 5) the principle of inhibition of nervous processes [here mutual induction is actually implied.—*A.P.*].

Blonsky wrote: "The doctrine of conditioned reflexes explained very much in animals' behaviour, for instance, the change in a living being's habitual behaviour caused by domestication (so-called training of reflexes). It also can explain the emergence of new connections in a living being's individual experience (so-called associative memory)."[1] He concludes: "Pavlov's doctrine of conditioned reflexes is the key to understanding the higher forms of animal behaviour."[2]

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[1] P. P. Blonsky, *An Outline of Scientific Psychology*, p. 38.
[2] *Ibid.*

Blonsky's *Psychological Essays* (1927) reveal the still greater impact of Pavlov's ideas upon his psychological views. Widely drawing on Pavlov's *The Twenty-Year Experience...*, Blonsky provides a detailed interpretation of a whole range of psychic phenomena relying on Pavlov's theory of conditioned reflexes.

The Soviet psychologists' efforts to turn psychology into an objective science, into a field of precise knowledge stimulated their interest in the biophysical ideas of Academician Lazarev.[1] In 1922, Lazarev published a book which opened with the following epigraph: "The crown of the creative activity of the human mind is resolution of the problems it confronts by mathematical analysis."[2] Lazarev considered the problem of research into the mechanism of higher nervous activity one of the most interesting problems tackled by the greatest minds, and said that the experimental method, which penetrates the complex areas of "nerve physics and physiology", provided the primary mainstays for future works "that should link physics and physiology, on the one hand, with psychology, on the other".[3] His own works were all written in that vein, proving the applicability of the ionic theory of excitation to the operation of the higher nervous system. Lazarev elaborated and tested by experiments the theory of adaptation of the sense organs to the irritants acting upon them (he carried out detailed studies of the light and dark ocular adaptation). He was the first to formulate the theory of the excitation of twilight vision, which took into consideration the quantum nature of light and the discrete nature of the retina's light-perceptive elements. His works of 1921-1923 laid the ground for the elaboration of contiguous problems related to biophysics, physiology of the sense organs

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[1] Lazarev's report "On the Physicochemical Foundations of Higher Nervous Activity" was met with great interest by participants in the First All-Russia Congress on Psychoneurology (1923).

[2] P. P. Lazarev, *The Physicochemical Foundations of Higher Nervous Activity*, Moscow, 1922, p. 3 (in Russian).

[3] *Ibid.*

and psychology of sensations and perceptions (by Kravkov, Kekcheyev, and others).

There was also another tendency in psychological research at that time—attempts to link psychology with the theory of evolution; its most outstanding representatives were Severtsov and Wagner. The central problem was, in their opinion, to discover the role played by the psyche ("psychic abilities" was Wagner's term) not only in the individual life of animals, but also in the process of their evolution and transformation. In his book, *Evolution and the Psyche* (1922), Severtsov analysed the "form of adaptation by changing animals' behaviour without changing their organisation". This led him to examine different types of animals' psychic activity in the broad sense of the word. He showed that the evolution of "adaptation by changing behaviour without changing the organisation" proceeded along two diverging main lines and reached the peak in two types of the animal kingdom. In the arthropods, hereditary changes in behaviour (instincts) evolved so that in their higher representatives—insects—exceptionally complex and perfect instinctive response actions developed, adapted to all minute details of their existence. However, this sophisticated and complex apparatus of instinctive activity is at the same time very sluggish: animals cannot adapt to rapid changes in the environment.

The chordates underwent another type of evolution: instinctive activity did not achieve high peaks, but instead, their adaptation proceeded along the lines of individual changes of behaviour, so that the organism's plasticity was greatly increased. The hereditary ability of adaptation was crowned by a superstructure, consisting in the individual changeability of behaviour. This superstructure reached its peak in man as a being, Severtsov emphasises, who can adapt to any conditions of existence and is capable of creating for himself an artificial medium—the medium of culture and civilisation. From the biological point of view, there is no other living creature who possessed better adaptability and hence a better chance of survival in the struggle for existence.

Wagner shared Severtsov's idea of the merits and shortcomings of the "biological point of view" as applied in examining human psychology.[1] He thought that a scientific study of psychology could only proceed in an evolutionary order, from the simple to the complex, from animals to man, and not vice versa. In Wagner's opinion, no exception should be made even for man, since the theory of evolution had turned from a hypothesis into a scientifically proved fact. Wagner emphasised that it was impossible any longer to be passive, which was characteristic of biopsychology after Wilhelm Wundt. Human psychology should be placed in the same position in respect to animal psychology as the anatomy of man to comparative anatomy, the physiology of man to comparative physiology, etc. He was far from thinking, however, that the psychology of man should be annulled altogether by transferring its tasks into the competence of biopsychology or comparative psychology. Yet the branch of psychology, which specialises in the study of the human psyche, will only be capable of scientifically analysing the material at its disposal if it adopts the laws governing the evolution of psychic abilities.

All Wagner's arguments are of great value for the development of psychological knowledge on the basis of the theory of evolution and were subsequently organically included into psychology, comprising the content of its phylogenetic sections.

The view of the human psyche from the angle of evolution typical of Severtsov and Wagner helped overcome an epiphenomenalistical interpretation of the role played by the psyche in the process of vital activity and behaviour. At the same time, the evolutionary conception of Wagner and Severtsov was of a spontaneously-dialectical nature and was not of itself conducive to creating conditions for a genuinely scientific historico-materialist view of the evolution of the psychology of man. While according homopsychology a place

[1] Here Wagner refers to Severtsov's book, *Evolution and the Psyche.*

among biological sciences, Wagner was still unable to see man as a product of history, and not only of biology.

Like all the rest of the representatives of the natural-scientific trend, Wagner could not build the bridge between the biology of man and his socio-historical essence and thus, while restructuring animal psychology on the principles of materialism and Darwinism, he proved to be powerless to interpret human psychology. In the initial period of the development of the science of psychology in Soviet Russia, this failure to characterise the foundations on which psychology should be built, even though they were perfectly aware of the inconsistency of the former psychological systems, was typical of all natural scientists and all psychologists who pondered over the destiny of the science they were actively engaged in. Lange's words that a contemporary psychologist was like "Priam at the ruins of Troy" were repeatedly quoted in books and articles dealing with the subject-matter and goals of psychology.

The three most important books written on the principles of objective psychology by prominent Russian psychologists and published at that time were: *General Foundations of Reflexology* by Bekhterev, *An Outline of Scientific Psychology* by Blonsky and *The Theory of Human Reactions* by Kornilov. These works substantiate the idea of developing psychology as a natural, biological science, studying human behaviour through objective methods and counterposed in principle to subjective psychology which thrived in the past. The principal theses of the three works were the result of polemics with subjectivist psychologists. These theses are: assertion of the neutrality of psychology—as the antithesis to its dependence on idealist philosophical systems; recognition of the "behaviour of man" (Blonsky), "correlative activity" (Bekhterev) and "human reactions" (Kornilov) as the subject-matter of psychology—as the antithesis to the study of the soul and spiritual phenomena in subjective psychology; and the primacy of objective methods in investigations—as the antithesis to introspection. Though all three books contain a wealth of

factual material, they did not constitute a serious progressive step as compared with the contemporary Western objective behavioural psychology or pre-revolutionary Russian psychology. The rift between objectivism and subjectivism became more pronounced, the criticism of idealistic introspective psychology became sharper, the vital link between psychology and natural science realised deeper—and yet these books did not, and could not effect a revolution in the foundations of the science of psychology.

The initial period in the development of psychology in the USSR had the imprint of the crisis in psychological knowledge, which was not eliminated by the fact that speculative psychology had lost its positions and had left the stage of history. The essence of that crisis remained unchanged. No adequate interpretation of the subject-matter of psychology could be provided because of the metaphysical understanding of spiritual life, even if the psyche and its role in behavioural processes were negated, as, for example, in the conceptions of "objective" psychology. Hence the diversity of scientific schools, all rejecting one another, a motley pattern of philosophical views and the absence of a profound scientific prospect of development. All schools, sections and trends of psychology revealed, at the end of the period under consideration, a need for a single theoretical platform, which could provide a solid methodological base for developing psychology as an integral philosophically-substantiated scientific system. Such a platform could be found only in Marxism.

The post-revolutionary years were a period in which the struggle for materialism and against philosophical idealism became a priority. The bourgeoisie made desperate attempts at resurrecting old society, first by armed force and later by ideological subversion. In this situation, the struggle for philosophical materialism and against idealism, which was the ideology of bourgeois counter-revolutionaries, actually constituted a battle for the existence and destiny of Marxism in the Soviet state.

In this connection, criticism of Bogdanov's (Malinovsky's)

revisionism, which served to restore Machism under the banner of "tectology" and Proletcult,[1] acquired tremendous importance. Lenin responded to Bogdanov's revisionism with his report "On Proletarian Culture" (1920) and another edition of his famous book, *Materialism and Empirio-Criticism*. Attached to the latter was V. I. Nevsky's article, "Dialectical Materialism and the Philosophy of Dead Reaction", which was written on Lenin's suggestion and was directed against Bogdanov's bourgeois-idealistic, anti-Marxist views. The dangerous recurrence of Bogdanov's revisionism was rendered harmless in time; however, it had a certain impact, in particular, in psychology.

Reactionary philosophers launched their last open attack at Marxism, noted for its ferocity, in 1922. Only a year had passed since the introduction of NEP (the New Economic Policy) in the country, but the outdated banners of ideal-realism (Lossky), philosophical transcendentalism (Radlov), Spenglerianism (Berdayev, Bulgakov), mystical rationalism (Frank), Husserlianism, Bergsonianism, etc. had already been taken out of the mothballs. A large number of small publishing houses cropped up in 1922, which printed dozens of books in rapid succession. The Psychological Society in Moscow University also intensified its activity. In 1918, the mouthpiece of the Society, *Voprosy filosofii i psikhologii* (Questions of Philosophy and Psychology), ceased to exist. However, when the Society met again in June 1922, its agenda did not differ from that of pre-revolutionary meetings (it heard the reports, among others, by I. Ilyin, "The Religious Meaning of Sincerity", by A. Ognev, "The Problem of the Reality of the Present-Day World", by P. Kononov, "The Soul and Personality"). The activity engaged in by the Free Philosophical Association and a number of other societies in Moscow, Petrograd, Rostov-on-the Don, Kostroma, was also similar to the

[1] Proletarian culture, a cultural-educational literary and artistic organisation (1917-32) dealing with various areas of art, especially literature and theatre.—*Ed.*

pre-revolutionary period. The Petersburg Philosophical Society resumed its activity and began publishing the periodical, *Mysl* (Thought), edited by Radlov and Lossky; three issues were released in 1922. The aim of this publication was to restore the former traditions of the journals *Voprosy filosofii i psikhologii* (Questions of Philosophy and Psychology), *Vera i razum* (Faith and Reason), *Logos, Khristianskaya mysl* (Christian Thought), etc. Karsavin, Askoldov, Frank, Vvedensky and others rallied around this new periodical, which openly propagated idealism and mysticism.

The Communist Party was confronted with the urgent task of organising a firm rebuff to philosophical idealism. It was necessary to establish a regular philosophic front to struggle for materialism. In 1922, Lenin initiated the journal, *Pod znamenem marksizma* (Under the Banner of Marxism), presenting its task as follows: "to propagandise militant materialism" and promote untiring atheist propaganda and an untiring atheist struggle.[1] The resolution of the 12th Congress of the Communist Party, "On Organising Anti-Religious Agitation and Propaganda" (April 1923), had the same aim. Marxist philosophers leveled devastating criticism against reactionary views in the press and in open discussions and intensified the propaganda of materialism in natural sciences.

Defeated in an open clash with the new ideology, idealism sought to conceal itself and resorted to all kind of ruses to attain its reactionary goals.

After 1922, following the publication of Lenin's article, "On the Significance of Militant Materialism", as well as the resolution "On Anti-Soviet Parties and Trends" of the 12th All-Russia Conference of the Russian Communist Party (Bolsheviks), held on August 4-7, 1922, direct attacks on Marxism from positions of philosophical idealism practically ceased, with a few exceptions (only Vvedensky and some other philos-

[1] V. I. Lenin, "On the Significance of Militant Materialism", *Collected Works*, Vol. 33, 1966, p. 229.

ophers still ventured to raise their voices). The idealist schools, including those in philosophy, began to change their tactics. They sought to make use of Soviet legality and to "grow into" the Soviet system, with the aim of transforming it in the spirit of bourgeois democracy. In science, and in particular in psychology, that amounted to ceasing to attack Marx and to even recognise—only in words, of course—that Marxism had a certain value for psychology. In the final count, however, their objective was to break away psychology from Marxist philosophy.

The last period of the activity of Chelpanov took place in this setting. He masked his idealist convictions behind the screen of Marxist phraseology, clever manoeuvring and organisational activities. Chelpanov's position was objectively anti-Marxist; it was in full accord with the general mood of a certain section of the old Russian intelligentsia at this political turning-point.

Chelpanov's position during the polemics in the early 1920s, was clearly exposed if his statements are compared with the views held by Vvedensky. As already noted, Chelpanov borrowed many of his theoretical propositions from Vvedensky back in the pre-revolutionary times. After the October Revolution, too, the Petersburg neo-Kantian philosopher was regarded by Chelpanov, who was beginning to feel the ground slipping from under his feet, as the lodestar. Vvedensky was a clever and perfidious enemy of materialism both before and after the October Revolution. As distinct from Lossky's empty speculation on the "concrete and abstract ideal-realism" and Karsavin's vague discourses about the Good and Evil, Vvedensky's article, "The Destiny of Belief in God in the Struggle Against Atheism", was a statement of militant theology, clearly and unequivocally opposed to atheistic propaganda gaining momentum in the Soviet Republic. In this article, Vvedensky expressed an idea which Chelpanov later repeated, incorporating it in the general system of his tactics: "The cause underlying present-day Russian militant atheism is, evidently, no secret. It is, evidently, dedication to Marx's

doctrine, taken in its immune form. Marx created a highly attractive socio-economic theory—that which is called Marxist, or scientific, socialism. But he made atheism and materialism its philosophical premise, which was not at all necessary in terms of logic. . ."[1]

Here we clearly see the essence of Vvedensky's "association" with Marx: to separate Marx's atheism and materialism from its scientific socialism and attack them one by one. Before the October Revolution, Vvedensky and his collaborators attacked Marx's scientific socialism; now, after the revolution, when scientific socialism had become victorious, they assaulted Marx's philosophical materialism and atheism.

It was precisely this tactical method that Chelpanov chose—to split Marxism, to break off economic materialism from philosophical materialism, to separate materialism from dialectics and to treat it as "vulgar", "naive". Chelpanov, like Vvedensky, could not accept Marxism in its "immune form", so he tried to find the meaning of "genuine Marxism". What he understood by that term we will make clear.

Chelpanov's chief goal in the polemics at the first few congresses on psychoneurology can be summed up as follows: not to allow psychology to be reformed in accordance with the ideology of Marxism. To bar to Marxism the road to psychology, to cut short the victorious advance of dialectical materialism from one branch of knowledge to another—that was the ultimate aim and the leitmotif of all polemical statements of the former leader of Russian University psychology. Chelpanov resorted to all kinds of tactical ploy and manoeuvres in his futile struggle. He was even prepared to declare himself a Marxist of long standing, since 1900, and to take upon himself the task of "defending" Marx and Engels from those who "did not understand" them and "distorted' their theory.

In Chelpanov's view, psychology should be a purely empirical

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[1] A. I. Vvedensky, "The Destiny of Belief in God in the Struggle Against Atheism", *Mysl*, No. 2, 1922, pp. 19-20.

science, in conformity with the inexorable tendency that allegedly was blazing a path for itself in contemporary world science. It should be a science, moreover, "free from any philosophy".[1] This was the first obstacle Chelpanov erected against the introduction of Marxism into psychology, since "any philosophy" spelled Marxist philosophy, and no other. As Teplov noted,[2] Chelpanov's demand "to draw a strict line of demarcation between the sphere of psychology and the sphere of philosophy" was quite unexpected and essentially amounted to a struggle against Marxism's penetration into the science of psychology, i.e. against the goal pursued by his chief opponent, Kornilov. This turnabout is no accident, however, since it was dictated by his general objective, which was described above. True, Chelpanov did not refer to Marx or Marxists to corroborate his idea: he cited Wilhelm Wundt, Oswald Külpe, George Frederick Stout and Horald Höffding and, of course, he relied on the authority of Vvedensky, the author of *Psychology "Without Any Metaphysics"* (these last three words Chelpanov emphasised).

Having publicly "driven" philosophy—meaning Marxist philosophy, of course—from scientific psychology, Chelpanov immediately opened the back door to idealist philosophy, announcing: "I have always understood that philosophy is the source of premises for psychology."[3] For Chelpanov, such "premises" were empirical subjectivism and psychophysical parallelism as a methodological concept.

Chelpanov was aware, though, that it was not enough to "drive the Devil" out of psychology, i.e. philosophical materialism. Thus, he delved into Marxist philosophy in order to prove that Marxism had nothing in common with materialism.

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[1] G. I. Chelpanov, *Psychology or Reflexology (Controversial Issues of Psychology)*, Moscow, 1926, p. 12 (in Russian).

[2] B. M. Teplov, "The Struggle of K. N. Kornilov in 1923-1925 for Restructuring Psychology on the Basis of Marxism", *Problems of the Psychology of Personality*, Moscow, 1960, (in Russian).

[3] G. I. Chelpanov, *Op. cit.*, p. 15.

To erect this second obstacle against Marxism's penetration of psychology, he had to engage in highly dubious historico-philosophical and logical quests. If we recall all the epithets Chelpanov attributed to Marx, we shall have quite a long list of these, testifying to the fact that Marx was a "hylozoist", "Spinozist", "empirical dualist", "idealist-subjectivist" at one and the same time.

Today it is hardly necessary to take seriously Chelpanov's assertions that Marx was an idealist of his own (Chelpanov's) hue. However, the system of arguments he applied to revise Marxism is interesting for understanding the struggle taking place in philosophy at that time.

For example, to "prove" his thesis, "Marx was a supporter of empirical, or psychological, parallelism, which underlies modern psychology", Chelpanov presented a manifestly untenable historico-philosophical "hypothesis": "The materialism of Marxism found its substantiation in Feuerbach's philosophy, while psychophysical parallelism, accepted in modern psychology, begins in the main from Fechner. Fechner and Feuerbach both start from Spinoza's philosophy. Modern scientific psychology assumed more or less complete form in the early 19th century. It is not without reason that the founding fathers of modern scientific psychology Fechner, Wundt, Spencer and Taine were the contemporaries of Marx and Engels. All of them, evidently, drew their knowledge from one and the same source."[1]

Chelpanov, who was noted for his knowledge of philosophy, had never before indulged in such light-minded analogies and outright falsifications as he tried to trace the origin of philosophical doctrines. This serves to prove that Chelpanov was using any ploy to defend the outdated "experimental metaphysics" to which he dedicated his whole life.

One may ask, why did Chelpanov have to falsify Marxism?

His primary aim was to obstruct Marxism's invasion of psychology. By portraying spiritualism, psychophysical paral-

[1] G. I. Chelpanov, *Psychology of Reflexology*, p. 29.

lelism, positivism and other idealist trends in Marxist colours to pass them off as Marxist philosophy, Chelpanov actually attempted to guarantee empirical psychology against radical changes, even if Marxism, as he put it, managed by force of circumstances to become psychology's theoretical basis. Let any trend of philosophy, be it subjectivism, empiricism, positivism or hylozoism be classified as Marxism—any trend at all except dialectical materialism, which would level old idealist psychology to the ground—such was the essence of Chelpanov's theoretical argumentation.

There was probably another, subjective and purely biographical motive behind Chelpanov's activity at that time, which could serve to explain the historico-philosophical quests of the venerable professor who tried in every way to portray Marx in colours typical of Wundt and Kant. Chelpanov tried to justify his old attacks at Marxism and materialism, which were epitomised in his book *The Brain and the Soul,* reprinted many times before the October Revolution. Realising that the views of people who knew him as an idealist could no longer be ignored, since they interpreted his current flirting with Marxism as rejection of his former stand, Chelpanov decided to identify positivist premises of contemporary empirical psychology with Marxism and prove in this way that he had not changed his position and had always been what he was now. The entire difference, he said, was in terminology. "Now that the terminology has changed, we must call our point of view of psychophysical parallelism, underlying psychology, materialism, while not making any changes in our views."[1]

Did Chelpanov think that he succeeded in placing insurmountable obstacles in the path of Marx's philosophical materialism as it advanced upon psychology? There is some evidence that he didn't, otherwise he would not have to try to invent yet another obstacle to the development of Marxist psychology by asserting that the latter was an ideology. Marx-

[1] *Ibid.*

ist psychology in the true sense of the term, Chelpanov said, was social psychology which studied the "genesis of ideological forms", and as such it should be developed and cultivated.

It is quite obvious that, in spite of its "Marxist" attire and references to Engels who emphasised the need for erecting an edifice of social sciences, Chelpanov's idea had nothing at all in common with Marxism. The "genesis of ideological forms" should be studied by historical materialism, not by psychology (or Marxist social psychology). The signpost Chelpanov mounted on his third barrier to Marxism could only lead the science of psychology into a blind alley of "psychologising" ideology and sociology.

Of course, Chelpanov was not concerned with the fate of social psychology, and even less with its penetration by Marxism at that period. He set himself quite a concrete task: to "localise" Marxism in the sphere of sociology, ideology and social psychology, and thus "liberate" from Marxism the area of empirical and experimental psychology. According to his reasoning, neither of these, the same as mineralogy, chemistry or physics could be based on Marxism. The main thrust of the report by Kornilov, Chelpanov's chief opponent at the First All-Russia Congress on Psychoneurology, stands out in bold relief against the backdrop of the "Marxist" theses formulated by Chelpanov which we cited above. The report opened with the following sentence: "The attempt to apply Marxism, or, in the expression of Plekhanov, 'modern materialism', to the area of psychology is seen by many people as an absolutely absurd idea which is contradictory in its very essence."[1]

Despite the most sophisticated tactics he devised, Chelpanov's efforts to stop Marxism's penetration of psychology came to nought.

From January 10 to 15, 1923, the First All-Russia Congress on Phychoneurology took place in Moscow. After a long in-

[1] K. N. Kornilov, *Contemporary Psychology and Marxism,* Moscow, 1923, p. 5 (in Russian).

terlude, Russian psychologists, psychiatrists and neurologists gathered to share results of their scientific investigations and decide on the tasks to be tackled in the future and on the lines of further research activities. The substantial number of reports (over 160) alone revealed that the difficult period in Russia did not halt the evolution of Russian science and that creative thinking continued to develop fruitfully despite unfavourable conditions. The work of the congress proceeded both at general sessions and at separate meetings of certain sections: the neurological, psychiatric, psychological (chaired by Chelpanov), pedological, physiology of the nervous system, physiology of labour and psychotechniques, and criminal psychology. The Organisational Committee was headed by Nechayev, and Bekhterev was elected Honorary Chairman of the Congress.

The All-Russia Congress on Psychoneurology was planned by its organisers as a direct continuation of the pre-revolutionary all-Russia congresses on pedagogical psychology and experimental pedagogy. This is made clear by the reports of the members of the Organisational Committee and the structure of the congress sections, the body of section chairmen, and the nature of the reports themselves. But it very soon transpired that the congress assumed another dimension. Instead of being an ordinary congress of old empirical psychology, the sixth in order, it became the first congress of the psychology of a new, revolutionary epoch.

From the outset, the congress won the close attention of the Party and Soviet public. The central newspapers, *Pravda* and *Izvestia,* carried reports about its sessions. In its editorial on the congress, *Izvestia* emphasised the scientific importance of the reports and noted that "the congress will have to discover, assess and unite the seats of new scientific efforts that are cropping up all over the country and the discoveries that are being made in them" (January 11, 1923). "The congress showed that in spite of the blockade and the Civil War, Russian scientific thought has not weakened and that it even demonstrated that during the period of its isolated existence

it can pass the test for independence no worse than West-European science" (*Izvestia,* January 17, 1923). The People's Commissar of Public Health Nikolai Semashko expressed the hope in his greetings to the congress that "the broad masses of the working people will find a science-based answer in the congress's deliberations to the questions with which they are concerned". *Izvestia* also published the abstracts of the chief reports made at the congress which were specially written by the reporters themselves (Kornilov's "Psychology and Marxism" and Bekhterev's "Subjective or Objective Study of Personality").

What was the reason for this close attention of the Soviet state to the Congress on Psychoneurology at a time when the Party was facing extraordinary economic difficulties and was desperately trying to fight famine in the country and curb the opposition of the factionists?

The chief reason was that the Bolshevik Party, which had emerged victorious in the Civil War and was engaged in restoring a peacetime economy, now began a struggle to win over science and scientists for a materialist basis of the natural and social sciences. That struggle was initiated by Lenin himself.

In his article "On the Significance of Militant Materialism" (1922), Lenin elaborated the tasks faced by the Party in the sphere of propagating materialist dialectics. He emphasised that "no natural science and no materialism can hold its own in the struggle against the onslaught of bourgeois ideas and the restoration of the bourgeois world outlook unless it stands on solid philosophical ground".[1] The young science of psychoneurology, as the sciences engaged in studying the brain were called at that time, including general and physiological psychology, physiology of higher nervous activity, reflexology, child and pedagogical psychology, pedology, psychotechniques, neurology and psychiatry, was also implied under the words "no natural science". This was how Lenin's thesis was cor-

[1] V. I. Lenin, *On the Significance of Militant Materialism, Collected Works,* Vol. 22, p. 233.

rectly interpreted. Therefore, it was clear that one of the most important problems confronting psychoneurologists was that of substantiating the science of psychology in philosophical terms. Hence the interest in and attention to the reports delivered at the congress, and in particular to Kornilov's report "Psychology and Marxism", as well as to his polemics with Chelpanov.

Lenin also wrote: "It should be remembered that the sharp upheaval which modern natural science is undergoing very often gives rise to reactionary philosophical schools and minor schools, trends and minor trends. Unless, therefore, the problems raised by the recent revolution in natural science are followed . . . militant materialism can be neither militant nor materialism."[1]

Since 1923, articles on the Marxist substantiation of the main problems of psychology began to be published not only in the journal *Pod znamenem marksizma*, but also in other theoretical periodicals.

In conformity with Lenin's behests, Marxist philosophy started a struggle for basing psychology upon dialectical-materialist principles. The First All-Russia Congress on Psychoneurology constituted an important landmark in this effort. The central event at the congress was Kornilov's report "Psychology and Marxism", in which he firmly demanded that "Marxism should be applied in the sphere of psychology".

The idea of establishing a "Marxist psychology", which was for the first time formulated by Kornilov in 1923 and initially caused heated debates, remained the banner of progressive psychological thinking over a number of years after the congress. Kornilov emphasised in his report at the congress that mental processes are nothing but a property of highly organised matter, and that such an interpretation should determine the question of the subject-matter of psychology. He also urged for basing psychological methods upon dialectical materialism (expressing this idea at the First Congress only in a

[1] *Ibid.*, pp. 232-33.

general form, Kornilov later developed it in his report at the Second All-Russia Congress on Psychoneurology, held in Leningrad in 1924). He thought that the system of modern psychology should not be held within the narrow confines of individual psychology alone, but should include social psychology, based on the theory of historical materialism.

The report, which the author himself called "a reconnaissance", met with a great response on the part of the audience. This can be seen by various comments and materials on the congress made public in periodicals and newspapers. As already noted, the theses of Kornilov's report were published in *Izvestia,* while the full text appeared in the journal *Pod znamenem marksizma* (No. 1, 1923) and as a separate booklet.

It is quite evident that Kornilov's report, supported (as the columnist of *Izvestia* noted) by the Marxist group of the congress participants, clearly reflected the impact of Party ideology on the science of psychology. Many realised this even at that time. The group of Marxist psychologists headed by Kornilov sought to resolve one of the "most vital practical tasks" indicated in the resolution of the 12th All-Russia Conference of the RCP(B) of August 4-7, 1922: "It is necessary to intensify the work of scientific communist thinking, in order to have an opportunity of carrying on in an organised way the line of 'militant materialism' and the entire ideology of revolutionary Marxism."[1]

Kornilov's report at the congress and his activity after it, criticism of Chelpanov's position in the central press *(Pravda,* October 24, 1924), as well as the change of the leadership of the Moscow Psychological Institute (end of 1923) and its reorganisation, and many other events should all be viewed in the light of the documents cited above.

Kornilov belonged to that group of Russian scientists (Timiryazev, Severtsov, Bekhterev, Lange), who linked their lives

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[1] *The CPSU in the Resolutions and Decisions of the Congresses, Conferences and Plenary Meetings of the Central Committee,* 7th Edition, Part I, Moscow, 1953, p. 673 (in Russian).

and activities with the Soviet state from its very inception. Kornilov was close to Social-Democratic circles even before the October Revolution; thus he wrote as he filled in the questionnaire given to him by a journal: "As for myself, I haven't suffered any changes in my ideology [in connection with the October Revolution.—*A.P.*], because I have been a member of the Social-Democratic Party since 1905, and at the moment of the present revolution I was a member of the Party of Internationalist Social-Democrats."[1]

Still, neither his Social-Democratic contacts, nor his closeness to the ideas of the natural-scientific trend in psychology, nor his work as a teacher in a remote Altai village could by themselves place Kornilov on the path of Marxism in psychology. Teplov wrote of Kornilov's struggle to introduce Marxism into psychology as follows: "In 1921, Kornilov demanded that psychology be separated from philosophy. In January 1923, he said: 'Since the very remote times and up to this day psychology has always been regarded as a predominantly philosophical discipline... And since this is so, we have all the more right to use Marxism in reassessing psychology—for it is a strictly scientific, or, as it is sometimes called, intrinsically-scientific philosophical world outlook.' "[2] Teplov stressed that Kornilov had to make strenuous efforts in his theoretical studies in the course of one and a half years between his first and second positions. This is true, of course, but we should also remember the following: it was in the same period of a year and a half (June 1921-January 1923) that the resolution we have cited above and Lenin's article, "On the Significance of Militant Materialism", were published. In his theoretical report to the Congress of Psychoneurology, Kornilov tried to provide a philosophical substantiation for psychology,

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[1] *Golos rabotnika prosveshcheniya* (The Voice of an Educational Worker), No. 6, 1922.

[2] B. M. Teplov, "The Struggle Waged by K. N. Kornilov in 1923-1925 for Restructuring Psychology on the Basis of Marxism", *Questions of the Psychology of Personality*, Moscow, 1960, p. 11 (in Russian).

about which Lenin wrote and without which it was impossible to withstand the onslaught of bourgeois ideas.

No doubt, Kornilov was sincere in his desire to see that philosophical substantiation to be Marxist. He was a conscientious adherent of Marxist materialism, but not yet during the First All-Russia Congress on Psychoneurology. This explains the battle of ideas and attitudes, in which many psychologists found themselves at that time. They had to choose between Kornilov with his advanced premises for a dialectical-materialist substantiation of psychology but a not always clearly-formulated and in many respects inconsistent system of views on the subject-matter and methods to be applied in the discipline, and Chelpanov, who barred the path of Marxism into psychology but at the same time tried to put the discipline on a customary, supposedly solid foundation of empiricism. For Kornilov, the span of time of one and a half years was sufficient to radically change his ideology, but not sufficient to master Marxist dialectics.

This fact did not prevent Kornilov from stressing, in his theoretical articles of 1923-1925, the new and valuable theses which he introduced into psychology. At the very beginning of his report to the First All-Russia Congress on Psychoneurology, he emphasised that Marxism firmly departed from the dualism of the psychic and physical and that it regarded the psyche, relying on Engels, Lenin and Plekhanov, as a property of the most organised matter. However, he found it necessary to draw attention to the reality of the mental processes, thus refuting Chelpanov's accusations of vulgar materialism, which were mostly based on references to Kornilov's book, *The Theory of Human Reactions from the Point of View of Psychology (Reactology)*.

It should be admitted that the book really gave grounds for regarding its author as a Büchnerian: "What we call psychology and psychological phenomena are essentially nothing else but processes of a purely energetic order"; "Psychology is nothing more than a part of physics, for what we call psychic processes are just a certain type of physical energy". The

book abounded in such statements.[1] In his article. "The State of the Question of the Relationship Between Scientific Psychology and Marxist Philosophy" (1926), Chelpanov made full use of the vulgar-materialist theses of Kornilov's *The Theory of Human Reactions...* for justified criticism. But when referring to Kornilov's speech at the First All-Russia Congress on Psychoneurology, he stated that he "has not taken the trouble to study Marx's philosophy during these two years that have elapsed and continued naively to believe that he is a Marxist while remaining a pure-bred Büchnerian,"[2]. Chelpanov did not support his assertion with a single fact. And this is not accidental: in his report at the congress Kornilov to a large degree had overcome the naive materialist conception of the psyche he had defended in the recent past.

Kornilov's arguments concerning the "spatial nature" of psychic processes also contained nothing of vulgar materialism. The spatial interpretation of psychic processes, Kornilov emphasised, only testifies to the fact that these processes are locally linked with a particular body, in this particular case with an organic body, and "this provides sufficient ground for making it possible to apply to them the category of spatiality". Thus, Kornilov's idea coincides with the interpretation of the psyche's spatiality in the works of Pavlov.

Kornilov approached Marxism as he overcame vulgar materialism, energism and empiricism typical of his former views, but he was still far from mastering it. He interpreted the psyche as a property of "the most organised" matter, but could not explain that property. He did not know Lenin's theory of reflection, accepted dialectics only formally, and had a vague notion of historical materialism. This became a source of serious errors made by this outstanding representative of Soviet psychology in the period under review.

In late 1923, Kornilov was appointed director of the Mos-

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[1] K. N. Kornilov, *The Theory of Human Reactions from the Point of View of Psychology (Reactology)*, Moscow, 1921, pp. 8, 142 (in Russian).

[2] G. I. Chelpanov, *Psychology or Reflexology...*, p. 23.

cow Institute of Psychology (at that time it was called Psychological Institute at Moscow State University) in place of Chelpanov. This was an event which went far beyond the framework of the internal life of the University and actually marked the beginning of a new epoch not only in the history of the Moscow Institute of Psychology, but in the history of psychology in general.

The significance of the struggle Kornilov and other psychologists waged against Chelpanov's idealism should not be minimised, even though that struggle took place within the framework of general difficulties Soviet psychology faced as it fought on two fronts—against idealism and mechanic materialism, and in spite of the fact that the situation was further aggravated by theoretical errors committed by Kornilov himself and some of his associates. Marxist psychologists won a decisive victory at the time when the First All-Russia Congress on Psychoneurology took place and the Moscow Psychological Institute was reorganised. Beginning with 1923, Soviet psychology, which had freed itself from the influence of Chelpanov's empiricism and adopted dialectical-materialist methodology, resolutely set about developing a Marxist psychology.

The chief result of the theoretical struggle Kornilov and his colleagues waged against the militant empiricism and clandestine idealism of Chelpanov, Nechayev, Portugalov and other supporters of conservative positions, was general recognition of the need to base psychology on Marxist principles. That was an important achievement: it signified the consummation of the struggle for the introduction of materialism into psychology. It was a struggle which had been waged by representatives of the natural-scientific trends in the discipline. Among them were those who did not set themselves the task of combining psychology and Marxism but actively opposed subjectivism characteristic of empirical psychology.

Notwithstanding a motley pattern of views current at that time among Soviet psychologists, two methodological principles became clearly defined by 1923, which were shared by

all or almost all of the most progressive scholars. The first general methodological principle was materialism which became a firm basis for the psychologists' scientific constructs. The second principle, which was adopted by the overwhelming majority of Soviet psychologists, was that of the determined nature of human behaviour (as opposed to the formerly accepted principle of indeterminism). Determinism in Soviet psychology was intended to take into account not only biological factors but mainly social and even class ones.

However, the very recognition of materialism and determinism as the methodological foundation of psychology, though it was positive and historically progressive, should not be identified with the restructuring of psychology on principles of Marxism. Had not Soviet psychology enriched its methodological pool by raising the issue of the role of the dialectical method in psychology, materialism in psychology would have remained metaphysical, and determinism would have amounted to nothing more than just mechanically taking account of the influence of heredity and a vulgar sociological analysis. As it was, the problem of applying dialectics to psychology became a central one in the methodology of the science in the mid-1920s.

In the article "On the Significance of Militant Materialism", Lenin pointed to the need to study Hegel's dialectics and at the same time noted that there would be difficulties in this respect. Marxist philosophical periodicals started publication of articles and various materials on materialist dialectics. In 1925, the *Bolshevik* periodical (Nos. 5-6) published a fragment of Lenin's "On the Question of Dialectics", in which he formulated two conceptions of development and noted the basic opposition between dialectics and metaphysics. "Dialectics," he wrote, "as *living,* many-sided knowledge (with the number of sides eternally increasing), with an infinite number of shades of every approach and approximation to reality (with a philosophical system growing into a whole out of each share)—here we have an immeasurably rich content as compared with 'metaphysical' materialism, the fun-

damental *misfortune* of which is its inability to apply dialectics to the Bildertheorie,[1] to the process and development of knowledge."[2]

Materialist dialectics developed in the works of the founders of Marxism as an integral world outlook embracing both nature and society. Soviet psychologists were carried away by the great prospects of restructuring their discipline on the basis of materialist dialectics, for they saw in it a realistic way out of the prolonged methodological crisis. Psychology is a scientific discipline which stands at the interface of biology and sociology. Thus, the dialectical method, which is advantageously applied in the sphere of these two sciences, should also find its place in psychology—this was how Kornilov and many other psychologists reasoned. The problem of combining psychology with Marxism, which was raised in only a general form at the First All-Russia Congress on Psychoneurology, thus assumed new and concrete forms: the task was raised of the need to apply dialectics to the theory and practice of psychology.

The Second All-Russia Congress on Psychoneurology took place in Petrograd on January 3-10, 1924. More than a thousand scholars participated, over 400 reports were made and nine specialised sections (of psychology, reflexology, psychotechnique, criminal psychology, etc.) worked. The congress reflected the wide range of work carried out in the field of psychology all over the country. Among the reports read at the sessions, which dealt with concrete scientific studies, there was greatest interest in the following: Ukhtomsky's "The Dominant as the Working Principle of the Nerve Centres"; reports made by researchers from Pavlov's laboratory—K. S. Bykov, I. P. Razenkov, B. N. Birman and Yu. P. Frolov, and reports by S. G. Gellerstein, K. Kh. Kekcheyev, A. L. Shnirman on problems involved in the psychology and physiology of labour.

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[1] The theory of reflection.—*Ed.*

[2] V. I. Lenin, "On the Question of Dialectics", *Collected Works*, Vol. 38, 1980, p. 360.

While recognising the value of many investigations in the area of psychology reported at the congress, it should still be emphasised that its historical significance was not due to the great variety and validity of the noted progress. The main thing was that it demonstrated in the year that passed since the First All-Russia Congress on Psychoneurology a major change that had taken place in the minds of scholars. As was noted by *Pravda* (January 10, 1924), "the shift that occurred among the workers of science has not been alone restricted to the sphere of politics—it is penetrating, deeper and deeper, into the substance of science itself... The scientific work of the congress is, by the will of the historical epoch, spontaneously reorganised ideologically in the spirit of our revolutionary public opinion. The congress's attention is riveted to the chief methodological principles of psychoneurology, because the revolution demands in the first place that the tasks and methods of scientific activity be formulated in a new way which in the past was unthinkable... The revolution has won over to its side not only scientists, but science itself."

The congress of scholars, which took place earlier in Moscow and which reflected the growing sympathy towards the Soviet state on the part of the intelligentsia, exerted an influence on the participants in the Congress on Psychoneurology. As some contemporaries noted, Marxists met with full approval at the congress. The very first indication of the fact that the majority at the congress shared new, progressive ideas was the failure of Nechayev at the first plenary meeting. Nechayev tried to reinstate the empirical principles while rejecting any philosophical approach to the problems of psychology. The delegates of the congress immediately discerned in Nechayev's approach evidence of the camouflaged idealist conception he shared with Chelpanov, which was already rejected at the time of the First All-Russia Congress on Psychoneurology. The attempt to restore subjectivist introspective psychology was severely criticised. Many participants in the congress came to the conclusion that it was no longer possible to live and work without relying on a definite philo-

sophical conception and that the lack of principles typical of psychology at that stage was but a "defensive reflex" against Marxist philosophy. The debate that followed Nechayev's report and its review in the press testify that the First All-Russia Congress on Psychoneurology constituted the border which could not be overcome by subjective empirical psychology as a trend in the science of psychology clearly delineated both in methodological and organisational terms. Typically, *Pravda* which carried summaries of the reports and debates at the congress also contained articles in which rejection of philosophy, including Marxism, was exposed as philosophical liquidationism. In one of the articles, "Against Philosophical Liquidationism" (*Pravda,* January 10, 1924), Lenin's words were cited that "no natural science and no materialism can hold its own in the struggle against the onslaught of bourgeois ideas and the restoration of the bourgeois world outlook unless it stands on solid philosophical ground"[1] to oppose Sergei Minin who tried to establish a "philosophical desert" in the world outlook of the proletariat, and Chelpanov and Nechayev who tried to expel Marxist philosophy from psychology.

The congress denied its support to empiricism declared by Nechayev and wholeheartedly sided with Kornilov, whose report "The Dialectical Method in Psychology" reflected the most vital needs of psychological science at that time. He also dealt with the same theme in his report at the concluding session of the congress. Kornilov attempted to apply the dialectical method to psychology in a way that was not only an abstract theoretical premise, but also a concrete condition in the analysis of the actual course of psychic processes. As he examined one fundamental principle of the dialectical method after another (the principle of continuous changeability of everything that exists around us, the principle of the universal connection of phenomena, the principle of universal laws, and the principle of development by leaps with transi-

[1] V. I. Lenin, "On the Significance of Militant Materialism", *Collected Works,* Vol. 33, p. 233.

tion from quantitative to qualitative changes, the principle of progressive development), Kornilov tried to prove that concrete phenomena, facts and laws in the sphere of psychology were also based on these principles, i.e., that dialectical principles were fully applicable in psychological research.

It is necessary, however, to draw a clear-cut line between the progressive nature of the demand to apply dialectics to psychological investigations worded for the first time by Kornilov, and the formal scheme of the "dialectisation" of psychological studies he proposed in his report. While noting the need to employ the laws of dialectics, he tried to prove that the views prevailing in psychology (including in empirical and even speculative psychology), corresponded to those laws rather than revised them from the angle of the dialectical method. In his book, *The Theory of Human Reactions,* for example, Kornilov "dialectically" confirmed, in the spirit of Hegelian trichotomy, the "principle of unipolar energy expenditure". In his opinion, the dialectical nature of this principle was expressed in the fact that energy in the human organism cannot be at the same time expended intensively both centrally—on mental labour, and peripherally—on physical labour. One kind of energy expenditure detrimentally affects the other. Thus, the "highest and most productive kind" of energy expenditure in the organism is a successive change of one by the other, which actually amounts to a synthesis of physical work and mental activity. It is quite obvious that this principle has nothing in common with genuine dialectics. Moreover, it rather tends towards mechanism, and can be considered "dialectical" only in word, i.e., formally.

Kornilov's attempt to prove that the chief dialectical laws had always been applied in psychology led him to still graver errors. Thus, he asserted that the principle of the universal connection between phenomena "is recognised by psychologists of all trends, representatives of speculative psychology inclusive" and that even supporters of speculative psychology and purely psychical causality (psychophysical parallelism) did not regard the psychic processes as not dependent on

anything. In addition, he even named Wilhelm Wundt, William James and Edward Titchener as bearers of the dialectical principle of continuous changeability. In expressing these ideas, Kornilov clearly mixed up the objective dialectics of psychic phenomena with its subjective, ideological reflection in the psychological systems and theories of psychologists who were far removed from dialectical materialism.

The significant contribution Kornilov made to Soviet psychology consists in that he was among the first psychologists to heed the call of the epoch and to formulate ideas which in their overall sense corresponded to the major methodological problem that had to be tackled in the late 1920s. At the time of the First All-Russia Congress on Psychoneurology, he had not yet mastered materialist dialectics to the degree that would enable him to provide concrete examples of the use of the dialectical method in psychology. Neither did he succeed in doing this in the next few years after the congresses when he published his *Textbook of Psychology Rendered from the Point of View of Dialectical Materialism* (1925), though it should be said that here he already ventured to come out with several dialectical sketches in the field of psychological problems.

Kornilov expressed his famous formula that dialectical psychology must become an organic synthesis of objective and subjective psychology for the first time in 1923-1924 at the time of the congresses on psychoneurology.

The formally dialectical scheme he proposed in his report at the Second All-Russia Congress on Psychoneurology contained premises that made the synthesis of objectivism and subjectivism, which Kornilov found to be organic and dialectical, inconsistent in principle. Kornilov failed to grasp that Marxist psychology could and should become a synthesis of objectivism and subjectivism only as a result of dialectically negating both, and not through their reconciliation under the banner of Hegelian dialectics. There was, however, no such dialectical negation to be found in Kornilov's report. On the contrary, it described how a compromise could be reached

between subjectivism and objectivism, for Kornilov thought that both contained dialectics. This compromise "synthesis" left its imprint on reactology, or "Marxist psychology" which Kornilov formulated, in particular in the period of the debates on the theory of reactology.

In the eyes of the majority of the congress participants, Kornilov epitomised Marxist principles in psychology However, since he failed to offer constructive dialectical solutions while calling for the development of psychology on the basis of Marxist dialectics, various trends of objective psychology won strong positions (Bekhterev, Borovsky, Protopopov, Zalkind). The views of Bekhterev and Zalkind, in particular, met with a wide response at the congress. The greatest success of reflexology is linked with the Leningrad Congress of 1924, as was noted by Teplov.[1] By moving to the foreground problems of genetic reflexology, Bekhterev pretended that he took into account the demands of the dialectics of development, though he did not reject a single principle of his reflexological conception.

The Second All-Russia Congress on Psychoneurology largely determined the alignment of forces and the tasks psychology faced for the next five years (1924-1929): it was a kind of prelude to ideological and theoretical struggle in psychology at that stage and it even made clear who would be the leaders. At that congress, Vygotsky made his appearance for the first time; he made a report and immediately attracted general attention. In the future, Vygotsky played a prominent role in the development of psychology. The main lines in the subsequent evolution of psychology also came into bold relief at the congress, e.g., Kornilov's reactology, Bekhterev's reflexology, etc. The major tasks confronting applied psychology, i.e., pedagogical and forensic psychology, were also presented. The congress constituted an important landmark in the development of the science of psychology in the USSR.

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[1] See B. M. Teplov, *Soviet Psychological Science Over 30 Years*, Moscow, 1947 (in Russian).

Chapter Four

PSYCHOLOGY AS THE SCIENCE OF BEHAVIOUR

By the mid-1920s, Soviet psychologists began to realise that the final victory of materialism over idealism demanded the elimination of traditional psychology which constituted the mainstay and the last refuge of idealism and metaphysics. Representatives of empirical psychology—Chelpanov, Nechayev, Portugalov and others—continued to insist on a dualistic interpretation of the link between the physical and the psychic, maintaining that the subject-matter of psychology were "subjective emotions, given in internal experience" and that the principal method applied in psychological investigation was self-observation. Objective psychology as the science of behaviour which ignored the study of the psyche in principle and offered a mechanic system of man's relations with the environment also retained its positions (Bekhterev, Blonsky, Borovsky). Even metaphysical speculative psychology, which was no longer a sovereign trend in psychology, began to quickly regenerate in the form of certain reminiscent Freudian conceptions. The idea that a new, Marxist science of psychology would not be created by assimilating all of these trends, by effecting their synthesis had yet to prevail in Soviet psychology. A genuine synthesis of all real achievements in psychological science could only be made on the basis of dialectical negation and by doing away with the principal theses of traditional psychology. Ideological and scientific criticism and self-criticism became in

those years the most important factor in the development of psychology and hence a major condition for it overcoming the methodological crisis.

The principled criticism of reactology, reflexology, Freudianism, Adlerianism, William Stern's personalism, Kretschmerianism, Gestalt psychology, biogeneticism and many other psychological theories cannot be separated from Marxist criticism in the philosophy of that time, the criticism which was accorded a central place in the ideological work of the Communist Party. Soviet philosophers brought under devastating criticism the neo-Kantianism of Max Adler and Karl Vorländer, the instrumentalism of John Dewey, the idealism of Berdayev, Husserlianism, the intuitivism of Henri Bergson, and idealist speculations concerning the theory of relativity. Revisionist forgery of Marxism, reflected in the writings of a Kantian variety of the German and Austrian Social Democrats was criticised with particular fervour. Falsifications of Marxism in the works of Max Adler, Theodor Steinbüchel and other philosophers, who sought to reconcile Marx not only with Immanuel Kant but with the Church, also met with a resolute rebuff. Soviet philosophers and psychologists sharply criticised the propositions of Alexander Varyash, Mikhail Reisner, Aron Zalkind and others, who tried to link Marxism with Freudianism. The struggle the Party was waging against bourgeois ideology was actually a struggle for the Marxist foundations of all sciences, including psychology.

The socio-political periodicals invariably published discussions on theoretical issues involved in psychology (for example, debates between Kornilov and Struminsky, Zalkind and Vainshtein, Kornilov's critical statements concerning reflexology and Borovsky's attacks on idealist animal psychology.)

Typical of the polemics of psychologists at that period was mutual criticism from positions of one's particular theoretical school which at that particular moment seemed to him to be a model of orthodox Marxism (a good example is the debate between "reactologists" and "reflexologists"). It should be noted, however, that no psychological trend existing at

that time could claim the right to be regarded as genuinely Marxist (the "Marxist psychology" of Kornilov included). Therefore, a factor that really mattered in the evolution of Soviet psychology was the struggle within the trends rather than between them, in the course of which representatives of different psychological schools crystallised their views and the leading cadres of Soviet psychologists appeared. As a result, realistic conditions were created for taking psychology out of the methodological crisis.

The central problem, around which the ideological and theoretical struggle was now waged in psychology, was that of its subject-matter. Though it was clear that psychology could no longer remain "a science of the soul", which it had been for ages, Soviet psychologists found it difficult to determine what should come under study of psychology as an independent discipline. Vestiges of the crisis which still affected the young science of Soviet psychology, were mostly felt in controversies on defining the object, goals and methods to be applied in psychological research. This is how Kornilov described the situation: "We have never observed in the history of Russian psychology such a great number of ideas advanced in society in the market of ideas, ideas that were often contradictory, perhaps erroneous, and even of no use at all." Here is an announcement addressed to its readers by the *Russky knizhnik* (Russian Book-Lover) Publishers: "In connection with a revival of interest among the broad public in psychology and sharp debates as to what should this discipline be, the *Russky knizhnik* Publishers announces subscription for two series of books on psychology: 'New Ideas in Psychology' and 'A Popular-Scientific Psychological Library'."

Verbatim reports of the Russian Association of Social Sciences Research Institutions, of which the Institute of Experimental Psychology was a member, contain a number of critical remarks made on the methodological aspects of the Institute's activities. Among other things, it was emphasised: "This situation is the result of the fact that the leading collective body which replaced the old leaders of the Institute,

does not have a single stable view of psychology" and "that has led, in particular, to the fact that at the present time [1926.—*A.P.*] the Institute does not present a single whole and is divided into a number of hostile groupings." The situation observed in other research collectives of psychologists was essentially the same.

The materialist proposition to the effect that psychic phenomena are not something apart from the entire material world, but are the property of highly-organised matter has already enriched the ideological and theoretical pool of Soviet psychology. Yet a general resolution of the problem of the subject-matter of the psychological discipline called for an answer to the question concerning the relationship between the psyche and the surrounding reality. That was only possible on the basis of the theory of reflection. However, no one at that time knew how to apply it to theoretical problems involved in psychology. There was yet another question, also essential in that situation—what was the relationship between the psyche and activity? This second question was tackled from positions of objective psychology, i.e., erroneously from the methodological point of view. As a result, the vast majority of manuals, textbooks and articles written in that period stated that the subject-matter of psychology was the behaviour of living beings (including man). The interpretation of psychology as a science of behaviour which was widespread at the previous stage (see the previous chapter of the book) persisted over the latter half of the 1920s. The methodological limitation of this interpretation itself created the preconditions for a split in the struggle for consciousness, which actually ensued in the early 1930s.

The interpretation of psychology as a science of behaviour which took shape in the course of the ideological and theoretical struggle at that stage, demands that the question of psychology's relationship with U.S. behaviourism be clarified. By the end of the 1920s, U.S. behaviourism (John Watson) completed its first stage of development. There was a complex interaction between U.S. behaviourism and Russian objective

psychology. Many Russian psychologists (Borovsky and others) were under the influence of U.S. behaviourism. However, U.S. behaviourism was under the still greater influence of the Russian scientific schools, in particular, those of Pavlov and Bekhterev.

Soviet psychology was called "a science of behaviour" in the 1920s. Reflexologists, reactologists and representatives of all other trends in psychology regarded this name as a guarantee of objectivism in psychological research as opposed to subjectivism practised in the old psychology. However, in their interpretation of behaviour, features which contradicted the theory of U.S. behaviourism came to the fore.

The "automatisation" of man, comprising the essence of U.S. behaviourism, stemmed from the needs of the imperialist political and economic system. As it expropriated the implements of labour from the worker and alienated the products made by means of these implements, capitalist society at the same time took away from him the right to dispose of his labour, i.e., of the sum-total of all actions of which labour consists. The higher the level of production mechanisation, the more labour processes became for the worker an automatic activity, whose meaning and purpose were of no concern to him. There is no agent behind the action here: a division has taken place between the "soul" and the "body", with the resulting transformation of the labour process into a chain of reactions on the part of "automation-workers". This actual process of depriving the "action" and the "agent" of the "soul" in capitalist production needed ideological and theoretical justification. Thus, attempts were made to the effect.

The theory and practice of such deprivation of the action of the "soul' was rooted in the special conditions under which bourgeois society developed in the era of imperialism. It was no accident that "behaviourism" emerged with its main characteristics in the 1880s-1890s and began to develop rapidly early in the 20th century, in the period of capitalism's stagnation and transition to its last stage, that of imperialism. Philosophical premises of this trend were already contained

in the doctrine of Auguste Comte (first half of the 19th century). It was the need of the capitalist system for a theoretical justification of depriving action of the "soul" in its general onslaught against consciousness, that led to the flourishing of behaviourism.

In Russia, the "psychology of behaviour" retained some features of similarity with behaviourism mainly in connection with the similarity of the term itself and the extreme reflexological views held by some mechanical psychologists. Following the October Revolution, though, a methodological restructuring took place in the theory of the "psychology of behaviour" as a result of its penetration by Marxism. The active role played by human consciousness was generally recognised, as well as the active role of man, the builder of a new society, in the changing social surroundings and in the setting of socialist cooperation. U.S. behaviourism in the second half of the 1920s was the result of an in-depth decay of the psychological systems of the old time. Soviet psychology as a science of behaviour during the same time was a stage in the ever-accelerating progress from a mechanical understanding of the subject-matter of psychology to a dialectical one. The crossroads of these two movements—the descending (behaviourist) and the ascending (dialectical-materialist)—was passed in the latter half of the 1920s, which serves to explain a certain similarity between them. The very name given to psychology—"a science of behaviour"—actually testified to its bourgeois origin, so that no "Marxist" "amendments" and "improvements" could do anything to change its substance. That was one of the chief reasons behind its decline, because the experience of socialist labour was constantly confronting the mainstays of behavioural psychology as it appealed to the consciousness of the "active worker".

Another reason why behaviourism did not long persist in Soviet Russia was closely connected with the first: the increase in the influence of mechanical trends in philosophy.

Beginning with 1924, mechanism became a prime danger in philosophy. Dialectical materialism was mainly attacked

"from the left", because idealist trends of philosophy had lost by that time all their importance and could not openly contend with dialectical materialism. Yesterday's adversaries of Marxism now resorted to left phraseology and donned revolutionary attire. There were also philosophers who erroneously believed in mechanism, and that served to prevent Marxist methodology from winning over concrete disciplines.

One of those who masked his views under left phrases was S. Minin, who rejected philosophy which he depicted as "servility to the bourgeoisie". E. Yenchmen, creator of the theory of "new biology", closely followed him: he rejected psychology, which he accused of a "betrayal" of the working-class interests and of "conciliation". He also went as far as declaring the world outlook to be just an "invention of exploiters". L. I. Axelrod, V. N. Sarabyanov and others followed suit, referring to the "increased demands" which were no longer met by the teaching of Marx, Engels and Plekhanov in respect to the problems of dialectics. They initiated a struggle aimed at "specifying", or, rather, revising Marxism, trying to occupy an extreme "left" position in philosophy. It goes without saying that behaviourism went along with these "left" mechanical trends.

As it erased qualitative distinctions between chemistry, physics, biology, physiology and psychology and reduced mental processes to atomistic-electronic and molecular motion occurring in the brain, mechanism created a philosophical platform for various branches of behavioural psychology. A direct result of the impact of mechanical philosophy was the biologisation of behaviour, on the one hand, and the psychologisation of sociology, on the other.

Behaviourism, which shared the chief theses of mechanism, was now able to retain positivism, Machism, neo-Kantianism and other kinds of idealist theory as its methodological base. In fact, idealism is the reverse side of metaphysical and mechanical materialism. Thus, it was not by chance that yesterday's empirical monist Bogdanov shifted to the positions of reflexology. He asserted that production was nothing but a

socially organised system of reflexes and that historical materialism was essentially reducible to "social reflexology" in the genuine, precise meaning of the word.

There was yet another reason for the revival of behaviourism in psychology. As the continuation of pre-revolutionary natural-scientific psychology, it imbibed its strong points along with all its weaknesses and shortcomings. Against the background of Marxist restructuring of the foundations of sciences, its merits began to fade, since now objective psychology was not the only alternative to idealist psychology. At the same time, the shortcomings which were always its typical feature, came into bold relief, in particular its one-sidedness, as a result of which representatives of the natural-scientific trend in psychology could not spread their materialist views to the sphere of social phenomena and venture an interpretation of human consciousness and personality that could lay claim to a certain degree of truth. Typical in this respect was the fate of objective psychology, or psychoreflexology, preached by Bekhterev. Objective psychology, which emerged in the early 20th century, was a progressive psychological system in comparison with idealist metaphysical psychology and even in comparison with many trends of empirical psychology. After the October Socialist Revolution, however, the traits of mechanism, energism and anti-psychologism became more pronounced in Bekhterev's reflexology, so that the inconsistency of this psychological school in terms of methodology became obvious.

As a result, representatives of behaviourism began to impose on psychology the naive materialist world outlook which it inherited from the natural science of the 19th century. Here we find the roots of A. K. Lents's "super-reflexes"; here is the source of the assertion that "the clenching of a hand into a fist and thinking are phenomena of one and the same order", and other ideas organically inherent in behaviourism.

We must also consider one important circumstance: the most prominent representatives of behaviourism were world-renowned scholars in the field of physiology, biology and

medicine. Their names epitomised scientific reliability of the investigations and theories to which they subscribed. Their scientific competence in experimental research into the operation of the brain in man and animals was immaculate and their conclusions were of tremendous value for scientific psychology.

However, as soon as they ventured into the area of broad theoretical generalisations, the weakness of their sociological and philosophical positions became apparent. Erroneous views were only shielded by the authority of their scientific fame. And the same shield was exploited by all kinds of "popularisers" and "theoreticians" of behavioural psychology to conceal their ignorance (this fully refers, for example, to Yenchmen).

Lenin advised militant materialists to closely follow the problems advanced by the modern revolution in the field of natural science, and warned: "Timiryazev[1] was obliged to observe in the first issue of the journal that the theory of Einstein, who, according to Timiryazev, is himself not making any active attack on the foundations of materialism, has already been seized upon by a vast number of bourgeois intellectuals of all countries; it should be noted that this applies not only to Einstein, but to a number, if not to the majority, of the great reformers of natural science since the end of the nineteenth century."[2]

In this connection, a few words should be said on the relation of Soviet psychology and philosophy of that time to the work and activity of Pavlov, who was deservedly regarded as one of the great transformers of natural science. The historians of physiology and psychology failed, in the 1940s and 1950s, to present a true-to-life picture of the relationship between Pavlov's theory and psychology in the 1920s. In the early 1950s, many of them treated all, or almost all cases

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[1] A. K. Timiryazev, son of Kliment Timiryazev, a prominent Soviet physicist.

[2] V. I. Lenin, "On the Significance of Militant Materialism", *Collected Works*, Vol. 33, p. 233.

when scholars followed Pavlov's doctrine, "popularised" his ideas or "developed" them, no matter how and when, as orthodox materialism in natural science and psychology. This situation should be explained. It would benefit the histories of psychology and physiology.

In the period under review, the doctrine of Ivan Pavlov was the central topic of debates on problems of behavioural psychology, together with the theories of Bekhterev and Kornilov. Characterising a very complicated situation in which any scientific worker, who attempted to adhere to a particular stand while orienting on certain authorities, would find himself in 1925, Portugalov wrote that an ordinary teacher or physician practising in some Russian province could well have had his head turned as he observed all the contradictions demonstrated by the theories of the three outstanding scholars (Pavlov, Bekhterev and Kornilov), and had to make his own choice. Kornilov does not allow the elimination of psychology, but Pavlov does not permit its recognition. Bekhterev does not permit the recognition of materialism. Pavlov does not allow the admission of the spatial nature of psychism, but Kornilov and Bekhterev do not permit the acceptance of psychism as non-spatial. Portugalov's characteristics are rather sharp and not quite correct (for example, as concerns his interpretation of Pavlov's position). However, as a whole it reflects the state of chaos in psychological thinking typical of that period, in which it was not so simple to find one's bearings.

In 1923, Pavlov's book, *The Twenty-Year Experience in an Objective Study of Higher Nervous Activity (Behaviour) of Animals,* was published in Moscow, in which his articles, reports, lectures and public statements on conditioned reflexes were collected. The titanic work carried out by the great scientist was highly appraised by the government of the young Soviet Republic and by Lenin personally a short time before that. Now, his work could be reviewed and assessed as a whole. Marxist periodicals unanimously hailed the book and Pavlov's doctrine. One of the Marxist journals wrote, for

example: "Marxism acclaims every creative attempt in any scientific area, if it corresponds to the materialist, and hence scientific world outlook. The theory of conditioned reflexes is such an attempt in the sphere of psychophysiology."

Still, philosophers, psychologists and natural scientists made a number of critical remarks concerning some elements in Pavlov's theory (not to speak of criticism of certain "popularisers" of that doctrine). How should these critical remarks be assessed?

Different opinions were expressed on this question. Thus, Ivan Aryamov asserted that the majority of Soviet psychologists either regarded Pavlov's theory with open hostility or ignored it. Aryamov collected all critical remarks of Soviet scholars concerning Pavlov in all kinds of works, at different time and for different reasons. He made no attempt to analyse these remarks and their historical nature, but classified them as slander against Pavlov and natural science as a whole.

We must say, however, that criticism of the ideas of the great physiologist from Marxist positions was by no means directed against the substance of his theory, but rather against certain vague and sometimes erroneous propositions he formulated, which interfered with the use of the theory of conditioned reflexes for substantiating dialectical-materialist psychology in terms of natural science. The criticism was theoretically based on Lenin's warning in his article, "On the Significance of Militant Materialism", that natural scientists would be helpless in their philosophical conclusions and generalisations unless they conscientiously sided with dialectical materialism.

In the early 1920s, Pavlov committed some mistakes in his broad philosophical and sociological generalisations, which were made use of by small reflexological schools as they spread his theory to social life and sociology. They speculated on Pavlov's authority, and in the final account spoiled the impression made by his doctrine as a whole. Marxist criticism concerned precisely these philosophical and sociological generalisations.

Two sections of the book *The Twenty-Year Experience...*, which contain Pavlov's speeches, "Reflex of the Goal" (1916) and "Reflex of Freedom" (1917), prove that Pavlov went far beyond the problems of the physiology of the brain and sometimes entered the sphere of social psychology. He asserted, for example, that the Anglo-Saxons epitomised the "reflex of the goal", that a purification of the present lowly relations between people and a "genuine, complete and durable human happiness" could only be achieved through natural science, and that the existence of obstacles was the main condition for attaining goals. There is no need now to analyse these futile efforts made by Pavlov to apply the physiological theory to social life and find "reflexes" which are its "main factors". These assertions demonstrate that certain critical remarks were quite relevant on the part of those who made them from Marxist positions, being then regarded, as they are now, as mere misunderstandings and mishaps in the great theory formulated by Pavlov.

In calling attention to certain erroneous remarks by Pavlov concerning social psychology, we must realise that they did not and could not have any significance for the development of the doctrine on higher nervous activity, even though they were discussed during the scientific debates of the mid-1920s and were upheld by some physiologists and psychologists. As time passed, Pavlov himself expressed such ideas at ever increasing intervals, for essential changes were taking place in his world outlook. The theory of the physiology of higher nervous activity created by Pavlov and his associates became the natural-science mainstay of the materialist theory of reflection and Marxist psychology.

Certain sociological, philosophical and historico-scientific prerequisites that existed in the latter half of the 1920s for the development in Soviet Russia of psychology as a science of behaviour could be correctly assessed only in their interaction. Behaviourism, which originated in the "alienation of action" and "depriving the actor of the soul", found its methodology in mechanical philosophy and developed its

theory behind the shield of natural science and Marxist phraseology, while taking advantage of the weakness of old natural-scientific materialist psychology and erroneous statements by prominent natural scientists. However, the principled Marxist criticism of the general theses of behaviourism and of its branches and schools, gained momentum with every passing year. Thus, by the end of the 1920s and the early 1930s, behaviourism had to yield its ground. It should be stressed that it was not only the result of the outside impact of this criticism. Above all, it was the utter incompatibility of Marxist-Leninist ideology and the theoretical premises of all forms of behavioural psychology.

Reflexology of the Bekhterev school, reflexological vulgarisation of the theory of higher nervous activity and reactology—were three major trends in psychology, in which the chief theses of behaviourism took root. Each was characterised by its own specific contradictions, which grew in intensity with principled scientific criticism. It thus brought about the collapse of these psychological systems, while creating conditions for the restructuring of the Soviet science of psychology.

The psychological trends of behavioural orientation openly declared their hostility towards idealism. It is quite probable that the majority of Soviet scholars, who supported behaviourism, were genuinely convinced that they sided with Marxism in a single front against idealist doctrines. Their inadequate and often superficial knowledge of Marxism, prevented them from realising that the propaganda of objectivism, positivism and mechanical materialism was fundamentally hostile to dialectical materialism, no matter how ardently they voiced their fidelity to it. The philosophical base of behaviourism inevitably generated idealism. Behaviourists and reflexologists, who negated the significance of psychological concepts and "drove" them off at first, were at the same time aware of their practical importance. They had again to draw these concepts into their theoretical constructs, but only as abstract concepts, not connected with life.

Reflexologists and objectivists did not wish to reduce their

investigations to the surface of facts alone. However, as they delved more deeply, they eventually "discovered" an idealistic idea underlying their approach. Gottfried Leibnitz, for example, confessed as he described his philosophical quests, that the mechanism of Descartes overcame him and led to mathematics. However, when he began to look for the laws to explain motion, he had again to turn to metaphysics and entelechies. Many supporters of objective psychology could undersign such a confession. This was the aim of consistent Marxist criticism of their positions at that time.

Not a single trend of behavioural objectivism could develop into dialectical-materialist psychology as a whole. However, separate doctrines—e.g., Pavlov's theory of conditioned reflexes, Bekhterev's works on neurology, the theory of the dominant as the working principle of nerve centres elaborated by Ukhtomsky, the results of experimental studies of psychic reactions in the works of Kornilov, and the evolutionary ideas formulated by Severtsov—were firmly included into the foundations of dialectical-materialist psychology. They were gradually digested and adjusted in subsequent years. The chief theoretical concepts of reflexologists and reactologists, which were only intended to create a semblance of an immanent dependence on these natural-scientific trends, could not be used to advantage. Thus, the scientific workers engaged in behavioural psychological research could shift to the positions of dialectical materialism only on condition that they renounced the chief principles of behaviourism.

Chapter Five

MARXIST CRITICISM OF PSYCHOANALYTICAL AND OTHER SUBJECTIVIST TRENDS IN PSYCHOLOGY

The description of the chief traits of ideological-theoretical struggle, waged in the field of psychology over the latter half of the 1920s, can by no means be reduced to criticism of various trends of behavioural psychology. Boris Teplov was quite right in noting that at that stage infatuation with certain psychological schools gripped Soviet psychologists, which seemed to them in one way or another to be "close" or even "related" to Soviet psychology. Of special intensity was the influence of German "integral" psychology, in particular the branch which came to be known as the Berlin school of Gestalt psychology. "The declarations against mechanism by representatives of this school and the seeming vitality of methodology applied in some experimental studies concealed the idealistic substance of this theory for many Soviet psychologists, though it represented a good example of the blind alley in which bourgeois psychological science had landed."[1] Many foreign authors were seen at that time as "fellow-travellers" of Soviet psychology who provided it with a kind of materialist substantiation. Typical in this respect was the book written by British psychologist Leander Jameson and the Plebs League, which many Soviet psychologists interpreted, although with some reservations, as an exposition of Marxist psychology. U.S. psychologist John Watson, the author of *The Ways of Behaviorism,* actively

[1] B. M. Teplov, *Soviet Psychological Science over 30 Years,* Moscow, p. 18.

cooperated with Soviet psychologists (by the way, he wrote the article "Behaviorism" for the Great Soviet Encyclopedia, 1st edition, Vol. 6), as well as German psychologists Kurt Koffka and Wolfgang Köhler, and others. However, their views differed radically from Marxism. This was revealed in the critical reviews of the systems of Koffka, José Ingenieros, Leander Jameson and other foreign psychologists, made in the first half of the 1930s by Kolbanovsky, Vygotsky and others. In the latter half of the 1920s, these distinctions were not yet clearly recognised. Moreover, the psychological system of representatives of the "Marxist science of behaviour", as Soviet psychology was called at the time, also had not been genuinely Marxist.

The mid-1920s were characterised by efforts to find "fellow-travellers" among behaviourists and to discover their spontaneously-Marxist tendencies. In the late 1920s, as a result of a certain disappointment in the principles of behaviourism, interest arose in the spontaneous-dialectical tendencies of representatives of so-called structural psychology. Biology was gradually overwhelmed by the trends which can be called spontaneous-dialectical, because there were a number of fruitful dialectical-materialist ideas and programmatic plans both in their general methodology and practical results, even though they rather often deviated, at times to idealism, at times to vulgar materialism. As a whole, these trends opened up new vistas before theoretical biology. Examples of these trends are synthesiology by anatomist Martin Heidenhein and Gestalttheorie by psychologist Wolfgang Köhler, who consciously projected and emphasised the need for studying the qualitative speciality of an organism as an entity.

However, the infatuation with Gestalt psychology, typical of the latter half of the 1920s, did not evolve into an independent trend in psychology. The idea of "integrity" was accepted as a working hypothesis in building a dialectical-materialist psychology and was interpreted as a spontaneous-dialectical hypothesis, or a sign of psychology's shifting towards dialectics.

The ideas of Gestalt psychology did not take root in Soviet psychology primarily because forces emerged in the latter that could oppose them. In 1930, for example, Vygotsky published an article, "Structural Psychology",[1] in which he presented a brief outline of Gestalt psychology and positively assessed the concept of structure as such, for it could serve as a major means of psychological research. However, he stressed the duality of that trend. On the one hand, it inclined towards a Marxist interpretation of structure, and on the other, it contained "contra-tendencies": as a result of its genetic links with the German natural-philosophical tradition, many perceptions of structural psychology assumed a metaphysical character. Vygotsky himself clung to the position of a bystander rather than a critic, as he urged "objective consideration" of both tendencies and only warned against futile hopes of finding in Gestalt psychology (as well as in any other trends of Western science) a ready-made system of Marxist psychology.

Two years later, in 1932, Vygotsky already provided an in-depth analysis of the chief ideas of Gestalt psychology in his work, *Modern Trends in Psychology*. He examined at length the struggle Gestalt psychology waged against vitalism and mechanism and revealed that structural psychology only fought against one of the possible forms of mechanism, moreover, it did not try to overcome it by demonstrating invalidity of the very idea of mechanism. It substituted another, more modern mechanical idea for the outdated one. The same was true with respect to vitalism: as it tried to overwhelm vitalism, structural psychology itself slid into the positions of vitalism, as in the case of mechanism.

Somewhat later, Pavlov sharply criticised the propositions of Gestalt psychology, stating that it was "one of the most futile efforts on the part of psychologists". He devoted his

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[1] See L. S. Vygotsky, *Collected Works* in six volumes, Vol. I, Moscow, 1982 (in Russian).

two lectures (November 28 and December 5, 1934) to the criticism of Gestalt psychology and demonstrated that by rejecting analysis as a method in psychology, supporters of that trend proved to be unable to explain the behaviour of man and animals.

Thus, the ideas formulated by structural psychology, which exerted a positive influence on the elaboration of the problem of perception and others, could not serve the establishment of an independent scientific trend in our country, first of all, because they encountered great opposition in Soviet psychology and natural science.

Another trend of psychology, Freudianism, had a fate all its own. Sigmund Freud was one of the most brilliant figures in the psychology of the 20th century. However, he was also one of the most contradictory. Freud was the first to introduce into the sphere of psychological science the problem of the unconscious in its relation to consciousness, to study the motivation of human behaviour and to outline the ways of studying its certain important mechanisms, such as "psychological protection". He presented new approaches to the study of man's mental life and thus substantially expanded the potential of psychology. However, at the same time, the theory of Freud concerning the dark unconscious forces which allegedly internally govern man, making him a toy in respect to sex and death, constituted the embodiment of the bourgeoisie's fear of social upheavals, expressed in their disbelief in reason and consciousness. Subsequently, Freudianism turned into a modernist apocalyptical religion of capitalist society, combining popular mystical idealist philosophy with its utilitary application to the sphere of everyday life and science, art and morality. The theory of Freud spread like wild fire, going far beyond its initial borders—psychology and psychiatry—to embrace ethics and aesthetics, the theory and history of literature and arts, and eventually created its own philosophy of history, its own pedagogy and sociology.

The pre-history of Freudian influences on Soviet psychology and psychiatry was not a long one. Freud's works were trans-

lated into Russian, but the scientific community did not evince great interest in them. Russian psychologists and psychiatrists met Freud's doctrine with a certain degree of concern. This is revealed, for example, by N. Samsonov's article on psychoanalysis, published in 1917, in which he stated, in particular, that Freud's theory was debatable, vague and inconsistent even when applied to dreams. Applied to ethnical psychology, it could well degenerate into a futile exercise. Moreover, Samsonov cited an assertion by one of the Freudianists to the effect that Kantian subjective idealism imposes on reality the laws of its own thinking, forcibly subjugating nature to reason. This is no more than an infantile instinct of cruelty and enslavement, linked with the libido. Kant was a latent sadist. This generated, by force of "sublimation", a philosophical coup d'etat with the violation of nature. It is no wonder, Samsonov concluded, that Freudian writing meets with firm opposition. Psychologist P. Efrussi also warned against dangerous prospects linked with the evolution of psychoanalysis and its corruptive influence, and stated in 1923 that he hoped the method of psychoanalysis would not become popular in Russia.

The failure of Freudianism in Russia can probably be explained by the fact that Freud was for the first time translated into Russian after 1911-1912, at a time when the decadent moods caused by the suppression of the 1905 revolution were balanced by a new revolutionary upsurge. However, it should be noted that in the West, too, Freudianism met with protests on the part of a number of psychologists in those years. It is no secret that the initially negative reaction to Freudianism had some common grounds in our country and in the West, and this fact is not to be ignored.

The position occupied by Freudianism in pre-revolutionary Russia should be dealt with in more detail. It was characterised, for example, in the preface written by Andrei Snezhnevsky to the book of Harry K. Wells, *Pavlov and Freud* (New York, 1956), which was translated into Russian in 1959. Noting that, though some Russian followers of Freud were

very active, the doctrine as a whole did not spread widely in the country. Snezhnevsky explained that by specific socio-economic conditions existing in Russia at that time and also by the power of materialist traditions in Russian science. However, if we look back, we shall reveal that over the first two decades of the 20th century, a negative attitude towards psychoanalysis was shared by the entire bourgeois society, including in Russia. On the other hand, many natural scientists, physicians and philosophers were prepared to regard Freudianism as a materialist doctrine, since they were misled by the pseudo-materialist cover concealing the idealist substance of that theory. At the same time references were lavishly made in Freudian writings to biology, physiology, endocrinology, etc. Quests into reasons for the failure of Freud's theory on the eve of the First World War would serve to make clear why Freudianism spread in capitalist countries so widely in the period between the First and the Second World Wars and aroused considerable interest among Soviet psychologists and even won some positions for penetrating into Soviet psychological science. One thing is clear: somewhere between the 1920s and the 1930s, there occurred a sharp change in public opinion in the attitude towards Freud's teaching.

Freud's theory initially came into contradiction with the view of society as a commonwealth of rational creatures, who organised their behaviour rationally, rendering it reasonable forms—a view persisting in world public opinion since the epoch of bourgeois Enlighteners of the 17th and 18th centuries. The philosophical and ethical views of the dawn of capitalism were projected into the 20th century as the principles of current morality widely drawn upon by the bourgeoisie. Freud was bound to produce an explosion in the false bourgeois morality because of his apology of the unconscious and irrational as soon as it came into contact with that morality. That explains the animosity towards Freud during the first few years of his activity. Those who then opposed Freud and Freudianism simply failed to understand that the Austrian psychiatrist embodied in his teaching the ideological doctrines

of bourgeois society better than anybody else, while taking it not in an embellished, but in its true state.

The imperialist war exposed the class essence of bourgeois society and thus served to reverse the attitude towards Freud and his theory. In a short period, he won popularity, success and general recognition.[1] His scientific theory assumed the dimension of an ideology and became the basis, upon which a new religious-mystical doctrine began to be quickly erected, a kind of a new Church, for which Freud's writings served as the Bible.

In the 1920s, Freudianism began a massive offensive on ideology in the West. In the period of the imperialist war and revolutionary upheavals, the bourgeoisie readily discredited consciousness and recognised that man's private and social life was dominated by the unconscious, since this view enabled it to absolve itself of all responsibility for the current historical events. Psychoanalytical thinking surrounded Soviet psychology and philosophy.

Freudianism was first spread in Soviet Russia by members of the Russian Psychoanalytical Society, among them M. V. Wulf and I. D. Yermakov. The society was a branch of the International Psychoanalytical Society, established in 1910. The Russian Society maintained close ties with foreign psychoanalysts. It united numerous psychoanalytical groups in Moscow, Kazan and other cities, and translated and published Freudian literature. The Russian Society was headed by Yermakov. Its most active members were psychoanalyst physicians, who practised Freudian methods of psychotherapy.

This explains why criticism of the Society's activity came mainly from academic medical circles and was directed against certain shortcomings in psychoanalytical methods of medical treatment rather than against the essence of Freudianism. For example, critical statements by V. Gakkebush, chief editor of the journal *Sovremennaya psikhonevrologia* (Contempo-

[1] Over five years (from 1914 to 1919), 1,260 titles of psychoanalytical literature were published (of them, 360 appeared in English).

rary Psychoneurology), in his polemics with Wulf are all in that vein. Expressing his distrust of the International Psychoanalytical Society which offered its members (including those without a medical diploma) the right to apply psychoanalysis for treatment of various illnesses, Gakkebush emphasised that psychoanalytical modes of treatment could do harm to patients, especially to children, and stated that it was wrong to see sexual conflicts as the source of most psychoneuroses.

This group of critics particularly objected to Freud's pansexualism. L. G. Orshansky, for example, wrote in his Foreword to the book *New Ways to Learn about Children*[1] by H. H. Hug-Helmuth, a follower of Freud, that "Freud's sexuality gradually turned into pan-sexualism, i.e., a single prevalent principle. That had to be proved. Thus, in particular Freud and his disciples began to apply this yardstick to all phenomena of the past and present—to history, mythology, art and literature—to the entire human medium... Freudianism then turned from science to sectarianism... Freudianism does not know any evolution. It does not want to be a theory, but a dogma, an axiom." However, despite the sharp tone of these characteristics, Orshansky himself, like other representatives of the "academic" opposition to Freudianism, accepted, though with certain reservations and modifications, the substance of the psychoanalytical teaching—the concept of the primacy of the unconscious, and saw Freud's greatest merit in the formulation of that concept.

We do not find any critical remarks concerning the fundamental principles of Freud's doctrine even in M. I. Astvatsaturov's *Psychotherapy and Psychoanalysis* which was most irreconcilable towards negative results of the application of the psychoanalytical method. Thus Russian psychoanalysts were not in the least concerned with Freudianism's authority and its methodological and theoretical platform. At the same time they criticised only certain minor issues involved.

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[1] H. Hug-Helmuth, *Aus dem Seelenleben des Kindes,* Leipzig und Wien, 1913.

Moreover, the "academic opposition" to Freudianism in medicine proved to be incapable of assessing Freud's doctrine on its merit. And the decline of the psychoanalytical schools in Soviet Russia was not the result of that opposition, but of a general onslaught against Freudianism launched in the latter half of the 1920s in philosophy and psychology. The history of the "academic opposition" to Freud in Russia, like the history of criticism of the psychoanalytical theory in general (more on this later), is a good proof that the substance of Freud's doctrine can be correctly interpreted only on the basis of Marxism-Leninism.

Freudianism exerted an influence not only on the work of the Russian Psychoanalytical Society. In the 1920s, one could observe a considerable interest in Freudianism among both psychologists and philosophers. One of the reasons for this was the growing dissatisfaction with the state of psychological science, in which prevalence of crude behaviourism led to ignoring the problem of the individual's activity and the dynamics of his evolution. Freud attracted all of them by his "readiness" to tackle the most sophisticated problems of the science and describe man's psyche in its dynamics, in motion, and in the interaction of all its parts and aspects. He seemed to leave out absolutely nothing: neither the individual's path of life, nor his internal contradictions, nor his birth, love and death. This seemingly complete knowledge of the intimate processes of the human psyche and the most secret motivations of human actions vividly contrasted with the bare reflexological and behaviourist schemas. That probably explains the general interest in his theory on the part of psychologists and philosophers, among them M. A. Reisner, A. R. Luria, B. D. Fridman, B. E. Bykhovsky, A. S. Griboyedov, and A. K. Lents.

Beginning with 1923, many articles and books appeared in which the psychoanalytical theory was dealt with in popular form and the possibility of uniting it with Marxism was considered. Reisner, for example, suggested that psychology be reformed on the basis of psychoanalysis, maintaining that this

provided the only possibility to answer the questions raised by the theory of historical materialism. He also noted, in his article "Freud and His School on Religion", the need to compare the sociological method of Marx with that of Freud in studying social psychology. Zalkind in fact "coupled" Freudianism with Marxism under the guise of criticising Freudian methodology.

What were the chief theses put forward by Freudo-Marxists?

Marxism is known to emphasise that the genuine nature of the motive forces acting upon human consciousness remains unrealised by people. "That the material life conditions of the persons inside whose heads this thought process goes on in the last resort determine the course of this process remains of necessity unknown to these persons, for otherwise there would be an end to all ideology."[1]

The propagators of psychoanalysis made an attempt to unjustifiably identify these Marxist propositions with the Freudian doctrine of the unconscious. They asserted that psychoanalysis is a continuation of historical materialism in psychology, as it studies "human activity". A general offensive against psychoanalysis began only in 1925, though its separate manifestations came under criticism from Marxist positions for a long time.

Clara Zetkin relates, in her booklet *About Lenin* which was first published in 1925, how Lenin asessed the so-called "sexual question" in general and Freudianism in particular: "The theory of Freud is now just a whim of fashion. I do not believe in the sex theories exposed in articles, reports, booklets, etc.—in short, in that specific literature which flourished in the dung-hill of bourgeois society. I don't believe in those who constantly and stubbornly concentrate on sexual questions, like an Indian fakir contemplating his navel. It seems to me that

[1] Frederick Engels, "Ludwig Feuerbach and the End of Classical German Philosophy", in Karl Marx and Frederick Engels, *Selected Works* in three volumes, Volume Three, Progress Publishers, Moscow, 1973, p. 372.

the great number of sexual theories, which for the most part are only hypotheses [somewhat earlier Lenin called Freud's doctrines that, too.—*A. P.*], and often arbitrary at that, stems from their authors' personal needs. Precisely from the effort to justify in the eyes of bourgeois morality their own abnormal or excessive sexual life and win tolerance towards themselves. This concealed respect for bourgeois morality is as disgusting to me as indulgently delving into the questions of sex. No matter how much this pastime tried to appear rebellious and revolutionary, in the final account it cannot be anything but just bourgeois."

The words Clara Zetkin cites in her booklet were stated by Lenin in 1920 (when he discussed women's question with her) and we must assume that they were well-known to people surrounding him. At any rate, we know for a fact that in 1923, Nadezhda Krupskaya expressed similar views as she voiced her opinion of Freudianism: "Freud does not just take into account the role of sexual attraction in our actions. He inordinately exaggerates that role, while explaining all subconscious actions by sexual attraction. Many of his explanations are artificial, stretched out and besides are permeated by a bourgeois-philistine attitude towards women."[1]

Lenin's characterisation of Freudianism deprived it of its scientific attire and revealed its pseudo-revolutionary nature. In just a few words Lenin revealed the essence of Freudianism, as well as of other sexual theories (Freud was not alone in the hypotrophied interest in the questions of sex: suffice it to recall Arthur Schopenhauer, Friedrich Nietzsche, Otto Weininger), and demonstrated that these theories were all linked with bourgeois morality and the personal needs of the bourgeoisie, who try to conceal them behind a generally-recognised morality. Psychoanalysis was given in this statement by Lenin a short but at the same time exhaustive Marxist characterisation.

Pravda (June 14, 1925) recognised the great importance

[1] N. K. Krupskaya, "Labour School", *Na putyakh k novoi shkole* (On the Way to a New School), No. 5, 1923, p. 160.

of Clara Zetkin's booklet. In the comment on its pages, Lenin's estimate of Freudianism was italicised, and the following conclusion was provided: "Those who wish to combine Freudianism with Marxism and make use of Freud's 'achievements', must ponder over these words." Recalling Lenin's words: "I may sometime deliver a lecture or write on the questions touched upon. But not right now", *Pravda* stated: "Comrade Lenin did not manage to keep his promise. That is why the publication of the recollections by Comrade Zetkin is so important."

Basing themselves on Lenin's works and applying dialectics in their analysis of ideological phenomena, Soviet philosophers and psychologists sharply criticised efforts to regard Freudianism as an ally, and not an adversary, in ideological struggle. Their evaluation of Freudianism in 1926-1927 clearly indicates that Soviet science must part ways with Freudianism. If we examine critical literature on psychoanalytical problems of that time, we shall see that not a single fundamental Freudian thesis could withstand the onslaught of Marxism. As a result, after 1927, the psychoanalytical trend in psychology (including social, child and pedagogical) lost its positions and was swept into oblivion. The vast majority of Freudianists among Soviet psychologists and philosophers renounced their former psychoanalytical views. B. E. Bykhovsky, for example, now provided convincing proof that Freudianism was "utterly inconsistent" as "one of the varieties of the biologisation of social phenomena".

The chief propositions contained in many statements against the psychoanalytical theory of that period have retained their importance even today. What fundamental theses were used by Marxist psychologists in those years to oppose the Freudian theory?

As was already noted, the supporters of Freudianism made attempts to combine the Freudian concept of the unconscious (*Unbewusstsein*) with Marx's concept of the unconscious, and thus to strengthen Freud's positions with the authority of Marx.

The founders of Marxism used the word "the unconscious" time and again in their works. However, that fact alone does not prove that Freudian claims are justifiable. Marxism uses that term in a sense which is radically different from that rendered by Freudianists. In Marxist theory, this term implies "absent, incomplete", or even "distorted knowledge of the objective processes of nature and society". Thus, "the unconscious" in Marxist interpretation means essentially "non-knowledge", whose nature is due to social reasons. Then, too, the concept of the unconscious is applied by theoreticians of Marxism first of all in reference to the mass of the people rather than to an individual personality.

All this has no connection with the Freudian theory of the unconscious. According to Freud, "the unconscious" is not a lack of knowledge, not a negative moment in the psyche, but vice versa—it is a sum-total of certain positively acting psychic tendencies (for example, the libido). The nature of the unconscious is determined not by social reasons, but on the contrary, by biopsychic moments. It is clear, therefore, that Freudianists' references to "the Marxist theory of the unconscious" have no basis at all. In their criticism of the Freudian concept of the unconscious, Marxists pointed out that social phenomena can only be understood in the light of the laws typical of society as a whole, and not on the basis of studying individuals, because society is not to be presented as an arithmetical sum of individuals. Thus it was made clear that the Freudian doctrine of the unconscious was not valid in sociological terms.

The teaching of Freud on the content of the psyche also came under a devastating criticism.

In the critical works of 1925-1927, it was shown that the Freudian theory of the content of the individual's psyche can be reduced to the following three theses. First, complete prevalence in the unconscious of psychic archaisms, that is, inherited psychic formations similar to animal instincts plus everything that had been eliminated, ousted from the consciousness of an individual during his childhood as incompat-

ible with human existence in principle (e.g. Oedipus complex). Second, priority of the unconscious in spiritual life. Third, recognition of the sexual nature of all psychic phenomena. The critical comment to these three theses amounted to the following.

As regards the first thesis. Can the content of the unconscious in man be really reduced to psychic archaisms? Freudianism substitutes the struggle waged between unconscious attractions and consciousness for the reflection of a real conflict between existing social forces, in the interaction of which personality evolves. Even without any inherited material, there is enough ground for psychological conflicts, inner struggle which in actual life is triggered by contradictions of the actually existing external medium as reflected in the psyche.

As to the second thesis. Asserting the priority of the unconscious, Freudianism comes out in defence of a certain unchangeable metaphysical principle, allegedly independent of place or time. But in actual life, the unconscious can only become the master of the psyche as a result of pathopsychological anomaly. And this change in the relationship between consciousness and the unconscious is just a particular case in the infinite range of various psychological situations.

Regarding the third thesis. According to Freud, all types of psychic activity are nothing but transformed sexual attraction. Presenting sexualism as the absolute in fact obstructed cognition of the actual content of the psyche, in particular, of those interests, needs and motivations which the individual develops in his diverse social activity (trade, school, family, scientific and political work). The concrete, historical content of the psyche is completely ignored. Sexualism as treated by Freudianists amounts in fact to disregarding social phenomena. One of the critical articles of that time stated: "Analysis of the main individual-psychological propositions of Freudianism every time leads us against one and the same fundamental error, i.e., ignoring the fact that mentality is determined by social phenomena. And this kind of error inevitably

leads to a number of derivative errors. Indeed, no matter how strong is the emphasis laid by Freudianists on the dynamic nature of psychical mechanics, that dynamics stubbornly turns into stability each time it is at a loss to explain dialectical changes that occur in the mentality in different historical conditions. No matter how much they talk of the possibility of mastering the unconscious through psychoanalysis, actually their doctrine is permeated with fatalism which logically stems from the theory of psychic aborigines and the priority of the unconscious. It goes without saying that all these basic and derivative qualities of Freudianism have nothing in common with Marxism."

The method of psychoanalysis also came under no less devastating criticism. It was stated that application of this method can produce all kinds of concepts and laws, all of no value. Any prejudices of an investigator based on his social nature—in this particular case (i.e., in the case of classical Freudianism) on the social nature of certain circles of the decadent bourgeoisie—can find a place within the arbitrary confirmation.

In the 1920s and 1930s, criticism of the psychological and psychopathological theories of Freudianism was highly significant, since the substance of Freund's sociological views lay on the surface and was therefore easier to estimate than the individual-psychological propositions of psychoanalysis. In a number of cases, the critic who had just exposed the invalidity of Freud's sociological concepts, said that he could assume that Freudian individual-psychological propositions might be correct. One should not forget, though, that for Freud himself, as well as for his disciples, the psychological theory was the foundation, upon which the entire edifice of the psychoanalytical teaching, including its sociological wing, rested. Thus, in criticising Freud's psychological theory, Marxist psychologists rejected the entire system of Freudianism.

Rebuffing Freud's expansion of pan-sexualism into sociology, history, and social and individual psychology, Soviet science did not exhaust all the tasks involved in the analysis

of Freudianism. One area still remained to be studied—that of child sexuality. Historically, by the way, this sphere served as Freudianism's launching-pad in the development of the concept itself. Blonsky's *Essays on Child Sexuality*, published in 1935 and directed primarily against the Freudian theory of child sexuality, were of vast importance. Blonsky concentrated upon criticism of the research methods and interpretation of child sexuality by Freudianists and proved that their thinking was scientifically infantile.

However, in examining the criticism meted out to Freudianism in the second half of the 1920s and first half of the 1930s, it should be noted that subsequently it had a negative side effect. Together with the rejection of Freudianism, the entire range of problems connected with the name of Freud was also renounced, i.e., the study of attractions, needs, the whole problem of the unconscious. A ban was also imposed on the study of the sexual development of children. At present, proper attention is given to these important problems (suffice it to recall the 1983 Congress on the Problems of the Unconscious which took place in Tbilisi).

In concluding our brief survey of the chief features characterising the ideological-theoretical struggle taking place in Soviet psychology in the latter half of the 1920s, it should again be stressed that the decisive factor in the evolution of psychological thought in that period was mastering materialist dialectics and profoundly studying the works of the founders of Marxism-Leninism.

Of fundamental importance was Lenin's outstanding theoretical work, *Materialism and Empirio-Criticism,* which, in the words of contemporaries, became a regular reference-book for the majority of Soviet psychologists, as well as his article, "On the Significance of Militant Materialism", which was a lodestar in the Party struggle to introduce Marxism-Leninism into natural science. In 1925, Engels's *Dialectics of Nature* was for the first time published in Russian. It constituted a veritable encyclopedia of dialectical materialism in the sphere of natural sciences. The year 1925 also witnessed the publi-

cation of fragments from Lenin's *Philosophical Notebooks*. Soviet psychologists in those years had just begun a titanic job of revising all the methodological theses of traditional psychology, their final goal being to lead psychology out of the blind alley into which it was placed by numerous prejudices it inherited from the past. How this struggle proceeded will be later revealed in dealing with the two leading trends in psychology of that period—reflexology and reactology.

Chapter Six

THE STRUGGLE FOR A MARXIST INTERPRETATION OF THE SUBJECT-MATTER OF PSYCHOLOGY

In examining the chief theses of human reflexology Bekhterev formulated in the 1920s, one cannot but see that, though he added new facts and propositions to his psychological system in the course of 20 years, he left intact the nucleus of objective psychology which had developed as far back as 1904-1908.

In the first chapter of the *General Foundations of Human Reflexology,* Bekhterev presents the subject-matter of psychological science in the spirit of objective psychology which in 1904 was characterised as the sum-total of knowledge related to objective manifestations of the neuropsyche. He characterises reflexology as a new scientific discipline treating human personality from a strictly scientific "biosocial" point of view. According to Bekhterev, this discipline constitutes a specific cycle of knowledge which considers not only the most elementary but also all higher manifestations of so-called mental activity, or the "spiritual sphere", in exclusively objective terms. Reflexology deals with the external specifics of man's actions, his mimicry and gestures, voice and speech as related to those physical, biological and especially social impacts in the past and present which underlie them. Objective psychology asserted that the goal of scientific research was not the simple registration of external reactions, but also their correlation with those external irritants which initially served as the sources of those reactions. Reflexology also retains this thesis.

What was new about reflexology as compared with the system of Bekhterev's objective psychology? In the interpretation of psychic phenomena, much more importance was attached to energy—an approach which can be traced to Bekhterev's book *The Psyche and Life.* In the *General Foundations of Human Reflexology*, Bekhterev interprets the whole world process, all the three worlds—the "inorganic, organic and supra-organic"—in terms of energism. The energy concept becomes the basis not only for propositions in the spirit of pan-psychism, but also for a mechanical interpretation of psychic processes.

Bekhterev also revised, from the angle of the energy concept, the resolution of the psychophysical problem he himself had suggested before the October Revolution in objective psychology and psychoreflexology. He wrote in 1909 that objective psychology deals not with subjective phenomena but with those processes in the brain which, according to the hypothesis of parallelism, were invariably followed by so-called psychic phenomena. This provides grounds for thinking that here we are faced with the viewpoint of psychophysical parallelism. However, in the *General Foundations of Human Reflexology* Bekhterev already recognised the identity of the mental and physical in a single energy stream, while sharply criticising the theory of psychophysical parallelism.[1] Instead of the concept of the "spirit" often referred to in subjective psychology and philosophy, he suggested the concept of "energy" manifested in the form of a nerve current.

Thus Bekhterev takes yet another step towards realising the identity of the physical and the mental which stemmed from his energism in philosophy. Mechanical materialism and idealism coexist without any conflict in Bekhterev's reflexology. This is clearly revealed in his interpretation of consciousness. While rejecting qualitative differences between human con-

[1] V. M. Bekhterev, *General Foundations of Human Reflexology*, 3rd edition, Leningrad, 1926, pp. 3, 63, 70-73 (in Russian).

sciousness and albumin formations, he wrote: "The energy, manifested in complex formations containing phosphorous albumins, is followed, in addition to the physical aspect, also by general subjective states which we define as our consciousness while observing them in ourselves in a developed form."[1] Further on, Bekhterev provides formulations which leave the door open to idealism, as for example, the following: "If you wish to recognise that consciousness is just a function of the brain, reflexology may accept that as a conclusion stemming from certain scientific data; it does not find, however, that other hypotheses concerning consciousness, it goes without saying with the exception of metaphysical ones, contradict it either."[2] Bekhterev's eclecticism actually blocked the path to the very raising of the problem of consciousness in human reflexology.

Continuing the comparison between reflexology and objective psychology, we must note that, beginning with the first edition of his *General Foundations of Human Reflexology*, Bekhterev insistently emphasises the need for elucidating "a particularly important role played by the social factor in the evolution of human personality".

However, what Bekhterev and many other reflexologists thought to be a step forward towards a Marxist interpretation of the law-governed evolution of human personality, actually was not that at all. Bekhterev was true to the idea of universalism, which was a logical result of his mechanical world outlook. He tried to link all processes in dead and living nature, including all manifestations of human society and human personality into a single chain of laws. Vulgar tendencies in the estimation and elaboration of problems of social psychology were clearly reflected in his *Collective Reflexology* (1921).

In the last period of his activity, Bekhterev tried to spread

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[1] V. M. Bekhterev, *op.cit.*, p. 48.

[2] *Ibid.*, p. 65.

his views far beyond the sphere of psychological knowledge. Reflexology was introduced into the field of pedagogy, pathology of personality, biology, zoology (pathological reflexology, genetic reflexology, animal reflexology, reflexological pedagogy and orthopaedy), as well as into sociology, the theory of art and other humanities.

During the first decade after the October Revolution, reflexology was supported by many physiologists, psychologists, physicians, pedagogues, authors and artists. But even in that period, mechanism, pan-psychism, energism and vulgar sociologism inherent in reflexological theory, met with opposition and criticism on the part of Marxist-Leninist philosophy. Marxist critics drew a distinct line between Bekhterev's neurologic and psychological studies and his reflexological doctrine. While recognising the great value of the former, they regarded the latter as alien to dialectical materialism, as philosophical speculation on the successes made by an objective scientific research into the psyche and on the interest shown by the public in the ideas of the reflexological theory.

What are the chief directions along which criticism of reflexology in the period under review developed?

The most devastating criticism was directed at Bekhterev's book, *Collective Reflexology,* and at the socio-psychological sections in the *General Foundations of Human Reflexology.* Marxist critics emphasised that these works in fact constituted an attempt to restore mechanical materialism of the 18th century. The chief methodological error of these works by Bekhterev, they pointed out, was their vulgar universalism, energism, substitution of biological and even physiochemical laws for the laws of social development. From the analysis of an isolated person, Bekhterev unjustifiedly attempted to pass immediately to the explanation of social life.

The struggle for consciousness as the subject-matter of psychological studies could also provide a sound basis for a justified criticism of Bekhterev's reflexology, which banished consciousness from reflexology as a "metaphysical" concept, together with feelings, sensations, etc.

Chelpanov repeatedly criticised reflexology in 1924-1926,[1] correctly characterising the fundamental contradictions of reflexological theory and noting that it had parted with subjective psychology but had not yet approached Marxist psychology. He pointed to Bekhterev's inconsistency on the question of the real nature of consciousness and methods through which it should be investigated in psychological terms. Chelpanov took pleasure in, rather than being annoyed by, this inconsistency and duality on the part of Bekhterev, since he was prepared to regard Bekhterev's eclecticism as a shortcoming inherent in materialist psychology in general. Pointing to Bekhterev who approved of the coexistence of reflexology and subjective psychology, Chelpanov noted that an introspective psychologist could gladly share this point of view.

Chelpanov's criticism of the theoretical foundations of reflexology contained in his articles and speeches, including those dealing with the problems of consciousness and behaviour, was made from the positions of the right, in the name of preserving introspective idealist psychology, whose interests he continued to defend. The main idea he tried to express in his critical remarks on reflexology is the following: Bekhterev's reflexology is nothing but old psychology, to which were added only attempts to reduce various types of spiritual life to reflexes. This estimate, though in many respects correct, did nothing at all to overcome the shortcomings typical of the conception of reflexology, because the only path Chelpanov suggested led backwards, to subjective idealist psychology.

Vygotsky offered different criticism of reflexological propositions. In his opinion, the nascent systems of psychology, reflexology among them, all suffered from a single "organic vice" —all eliminated the problem of consciousness. By ignoring the problem of consciousness, however, psychology itself barred its own path to the investigation of more or less complicated scientific questions and was reduced to discovering elementary

[1] G. I. Chelpanov, *Objective Psychology in Russia and America*, Moscow, 1925; *Psychology Or Reflexology (Controversial Issues of Psychology)*, Moscow, 1926 (both in Russian).

links between the living being and the world. Vygotsky saw this as the chief shortcoming of Bekhterev's teaching, which he called "naked" reflexology.

Of the greatest significance is the following passage: as the result of the elimination of consciousness from the sphere of psychology, "any border between the behaviour of an animal and that of man is eradicated in principle... Biology devoured sociology, physiology devoured psychology... That which is introduced into human behaviour by consciousness and the psyche and which is new in principle, is just ignored." Vygotsky warns against the danger contained in such simple transferrence of the law pertaining to the sphere of animal psychology into human psychology, saying that "here a certain principled reservation is needed". The importance of such "principled reservation" becomes clear if one recalls how often at that time the laws of biology were applied in the sphere of psychology.

"The most important thing," Vygotsky continued, "is that the elimination of consciousness from the sphere of scientific psychology in a large measure preserves the entire dualism and spiritualism of old subjective psychology. Bekhterev asserts that the system of reflexology does not contradict the hypothesis 'concerning the soul'." Then Vygotsky formulated an idea which in its significance went far beyond the criticism of the views held by Bekhterev and his school: "The chief premise of reflexology—recognition of the possibility of explaining man's behaviour, to the minutest detail, without resorting to subjective phenomena, and to develop psychology without a psyche—is in fact the dualism of subjective psychology turned inside out, its attempt to study a pure, abstract psyche. This is the other half of the same old dualism: there we have a psyche without behaviour, and here—behaviour without a psyche; both here and there the 'psyche' and 'behaviour' are understood as two different phenomena."[1]

[1] L. S. Vygotsky, "Consciousness as a Problem of Behavioural Psychology", *Collected Works*, Vol. I, pp. 80-81 (in Russian).

Regrettably, Vygotsky did not extend this indisputably correct description of reflexology in philosophical terms, as the dualism of subjective psychology "turned inside out", to all detachments of behavioural psychology. In the subsequent history of the theoretical struggle waged in psychology, Vygotsky's estimate of reflexology played a positive role and was repeatedly used as a weapon in fighting various recurrent efforts at restoring behaviourism and "eliminating" psychology through its replacement by physiology.

The next thesis of Vygotsky was directed against epiphenomenalism inherent in the doctrine of reflexology and the closed circuit of "biological nonsense" following from it. He said: either we should reject all study of human behaviour as impossible in principle, without any reference to man's psyche, or we must declare the psyche to be an epiphenomenon, a side phenomenon (if everything can be explained without it). The latter conclusion, in Vygotsky's characterisation, would lead to biological absurdity ("there is no third possibility").

The last argument Vygotsky made in favour of studying consciousness was connected with the problem of using the reflex as an explanatory concept in psychology. Siding with Wagner, he firmly objects to the false conception that man's behaviour is but the sum-total of reflexes: "It is true, Wagner states, that the reflex is a foundation, but judging by the foundation nothing definite can be said concerning what will be erected on it."[1]

These statements by Vygotsky are not directed against the reflex theory: on the contrary, he emphasises that the "methodological" concept of the reflex is "of great value". The crux of the matter lies in something else: "What is a sensation? It is a reflex. What is speech, gestures, and mimicry? These are also reflexes. And what about instincts, slips of the tongue, and emotions? Are all of these reflexes, too?... This is all true, of course, yet the scientific barrenness of the naked statements is clearly manifest." Here we do not see any protest

[1] *Ibid.*, p. 83.

against an interpretation of the psyche by reflexes: Vygotsky only objected to a mechanical obliteration of the qualitative differences between reflexes in the general structure of behaviour, as a result of which, he said, "the word 'reflex' itself is deprived of all meaning".

It goes without saying that Vygotsky could not pass by the "universal laws" so widely proclaimed in Bekhterev's reflexology. As he criticised universal reflexological "principles", Vygotsky aptly remarked: "It should not be forgotten that the volume and content of the concept are always inversely proportional to one another. And since the volume of the universal principles tends to infinity, their psychological content is at the same speed diminishing towards zero." This, Vygotsky further remarked, is not an inherent vice of Bekhterev's doctrine: "In one or another form, this vice can be seen in and tells on all attempts to systematically expose the doctrine on human behaviour as naked reflexology."[1]

We have dwelled on Vygotsky's article at such length because it contains a number of critical remarks on reflexology put in a concise and exact form. These remarks are most characteristic for the period of its temporary success and flourishing, as well as an intensified onslaught against it by Marxist philosophy and psychology.

After Bekhterev's death (in 1927) a complicated process of stratification, restructuring and self-criticism set in in the ranks of reflexologists. A large group of reflexologists (B. G. Ananiev, I. F. Kurazov, V. N. Myasishchev, and others) renounced the shortcomings of Bekhterev's orthodox reflexology, its energism, mechanist nature, empiricism and "sociological imperialism", and started a revision of the methodological foundations of the reflexological doctrine.

Bekhterev's reflexology was not the only school of reflexology to be found in psychology in that period. We have already noted, in analysing conditions that gave rise to behaviourism, that in the mid-1920s a small group of natural scientists made

[1] L. S. Vygotsky, "Consciousness as a Problem of Behavioural Psychology", pp. 78, 79, 82.

an attempt to turn psychology into a strictly physiological discipline, counting on the great popularity of Pavlov's investigations and the world-wide authority of his name.[1] This group of reflexologists claimed the monopoly right of interpreting the doctrine of the physiology of higher nervous activity "in theoretical terms". The reflexological vulgarisation of that doctrine effected by members of the group—E. Yenchmen, V. V. Savich, G. P. Zelyony, A. K. Lents and others—had nothing in common with a scientific elaboration of the theory of conditioned reflexes and did not follow the general line of Pavlov's research. However, in the period under review, it was held by some people as the propaganda of Pavlov's ideas and even defence of materialism in psychology and physiology. The philosophical platform of this "reflexological trend" (thus named to distinguish it from Bekhterev's reflexology) relied primarily on the principles of neo-Kantian criticism and the philosophical views of Vvedensky. Lents, for example, referred to Vvedensky in concluding that we cannot study mental states, since to do that, one should experience another's mental state, and that was impossible.

A similar system of arguments can also be found in other reflexologists. Let us illustrate this with just a single example. Protopopov wrote: "A wise saying goes: 'Another's soul is shrouded in darkness', and psychologists could not penetrate that darkness up to now, no matter how hard they tried. It would be of interest to point out that scientific psychology itself also speaks of this "impenetrability of another's 'soul'. Our Russian psychologist and philosopher Vvedensky even formulated a special law concerning the absence of objective signs of another's animation."[2] Further on, the author presents Vvedensky's agnostical view, clearly sympathising with it.

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[1] Many scholars who sticked to erroneous reflexological positions in theory, nevertheless made a substantial contribution into the experimental investigation of issues involved in the physiology of higher nervous activity.

[2] V. P. Protopopov, *Bekhterev as a Reflexologist*, Kharkov, 1928, p. 2 (in Russian).

How can we explain such a great attraction of Vvedensky's neo-Kantian philosophical system for reflexologists? The answer was provided by Lenin who stressed that reactionary philosophy had always made use of the "link" of physiology with the philosophical idealism of a Kantian variety. "The majority of the natural scientists who endeavour to construct broad theories of the laws of operation of human thought only repeat Kant's metaphysical theory regarding the subjectivity of our knowledge. . ." Lenin cited this thought expressed by Chernyshevsky and lauded his description of natural scientists as "the excellent argument".[1]

In the late 1920s, many psychologists and philosophers firmly emphasised the great value of Pavlov's works for psychology, while sharply criticising attempts of reflexologists to vulgarise them. Thus, Kornilov wrote, in considering prospects for the development of psychology in the USSR, that Soviet researchers saw the physiology of higher nervous activity as their closest ally, since it disclosed physiological mechanisms, an area of vast importance for psychology.

Anyone who studies the history of Soviet science should draw a distinct line between Pavlov's outstanding doctrine and the sheer speculation on its authority on the part of certain philosophising associates and "supporters" of the great scholar.

In the conditions of the general evolution of all social and natural sciences, Soviet psychology worked out and consolidated its methodology as a result of the successful struggle Marxist-Leninist philosophy waged against both idealism and mechanical materialism. Considerable methodological work had been carried out by all Soviet psychologists by the time the First All-Union Congress on Studies of Human Behaviour opened in Leningrad (1930). This was a remarkable event in the history of Soviet psychology. The idealist trends had been put to severe criticism, in particular old subjectivist empirical

[1] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, p. 360.

psychology. At that stage, the chief danger on the theoretical front was, as formerly, mechanism.

The First All-Union Congress on Studies of Human Behaviour took place in January 1930. It was much more representative than all previous psychological and psychoneurological congresses, both before and after the October Revolution: 3,200 persons took part in its work, more than 1,400 of them elected delegates. This demonstrated the great interest in psychological questions and the advance of psychology not only in Moscow and Leningrad, but also in the country's outlying regions. Work was conducted in four sections: the general (methodological), pedagogical, psychotechnical and a section on pathological psychoneurology. Over 170 reports were made by representatives of all scientific schools.

A definite interpretation of the problem of psychophysics was presented in the reports and statements of the Congress's participants. Contrary to the assertions of idealists who divided the mental from the physiological, and of mechanists who identified them, it was proclaimed necessary to establish a "unity in differences" based on the conclusion that the mental is a product of the development of the material, a form of the evolution of vital activity, its new quality. Human behaviour is caused and determined through physiological mechanisms, representing, as it were, a real synthesis between the social content and the physiological activity of an organism. Attempts to regard behaviour as a purely physiological phenomenon were firmly rejected, as well as its interpretation in one-sided sociological terms. A clearly-defined line was thus drawn between sociology and physiology on the one hand, and psychology on the other.

The Congress summed up the results of the substantial theoretical work carried out after the Second All-Russia Congress on Psychoneurology (1924). However, it did not bring about any radical changes, since the fundamental issues involved in the development of psychology were not sufficiently elucidated. Some scholars, who shifted to Marxist positions later than certain other scientists, firmly renounced their former views (in

particular, reflexologists). But Kornilov and many among his co-workers, who attempted to place psychology on a Marxist basis as far back as 1923, failed to see at the congress that the principles they suggested for the creation of psychological science no longer corresponded to the level achieved by Marxist theory in natural science and social disciplines. This lack of correspondence triggered many disputes.

In 1931, a debate on major issues of "reactological psychology" took place at the Institute of Psychology. That trend of psychology was correctly assessed from Marxist positions by participants in the discussions, who noted its concern with the concept of man "in general", ignoring the contradictions inherent in mental development, its physicalism or biologism. They noted yet another extreme—separating the psyche from physiological processes and the consolidation of the positions of idealist theories (Eduard Spranger's psychology of the spirit, William Stern's personalism). At the same time it was stated that Marxism was not going to discard the achievements made during the bourgeois epoch, but, on the contrary, was out to assimilate them and make use of all that was valuable.

The critics' attention focussed on serious errors made by leading psychologists of the Institute, among them the reactological views of its director, Kornilov.

Let us characterise reactology, or "Marxist psychology", propagated by Kornilov. The group he headed was mainly concentrated around the Moscow Psychological Institute. It consisted of the Institute's researchers and lecturers from several Moscow educational institutions Vladimir Artyomov, Nikolai Dobrynin, Lev Vygotsky[1], Alexander Luria, Zakhari Chuchmarev, Boris Belayev and others. Since 1928, the group published a periodical, *Psikhologia* (Psychology), edited by Kornilov, to which the group's members lavishly contributed (it

[1] Vygotsky, Luria, Alexei N. Leontiev and some other psychologits who worked at this Institute, held radically different views on a number of issues.

was published up to 1932). The core of "Marxist psychology" was in fact made up by those psychologists who sided with Kornilov in his polemics with Chelpanov in 1923-1925 and supported his suggestion to reorganise the Moscow Psychological Institute.

In the period between 1923, when Kornilov for the first time presented the idea of introducing Marxism into psychology, and 1931, when he actually discarded his position as leader of psychological science, his activity was of a dual nature and reflected the contradictory conditions in which psychology evolved. It would be a mistake to one-sidedly characterise Kornilov, accentuating his errors and methodological failures, as was done by some of his opponents in the early 1930s (A. A. Talankin and others). At the same time, it would be no less wrong to revise, on these grounds, the general assessment of reactology as a trend in behavioural psychology, reformed by Kornilov in accordance with his idea of effecting an "organic synthesis" of the latter with subjective psychology. Kornilov himself recognised the failure of his efforts at such a synthesis, since all the shortcomings typical of behavioural and subjective psychology proved to be inherent in reactology.

In 1921, Kornilov published a book entitled *The Doctrine of Human Reactions,* in which he summed up the results obtained in a large-scale experimental research carried out at the Moscow Psychological Institute. As formulated in the book's first edition, the doctrine is in many ways similar to Bekhterev's objective psychology, while differing from it by a broader interpretation of human behaviour. The crux of this psychological doctrine is the concept of reaction rather than of the reflex as in Bekhterev. The concept of reaction includes the following distinctions from that of the reflex: a) universality (all the response motions of organisms, including monocellular); b) an integral response of the organism rather than of its individual organ and c) the existence of the mental aspect (in higher representatives of the animal kingdom).

In Kornilov's idea, changing the concept of the reflex and extending it to the category of reaction would produce a syn-

thesis between the major opposing trends in psychology—the subjective and the objective. Subjective psychology was interested only in the mental or subjective, while ignoring motion and behaviour. Objective psychology ignored the subjective aspect and exclusively studied response motions. It should be pointed out from the very beginning that Kornilov's concept of reaction (in the same way as the reflex in reflexology) was regarded outside a historical context. Reactivity (responsiveness) was regarded as the property of both the organic and inorganic worlds, typical both of a primitively organised animal and modern man.

Kornilov sought to discover in man's behaviour a certain correlation between the biological and social moments, corresponding to his inborn and acquired reactions. However, the biological and the social in reactology proved essentially to be dualistically opposed to each other. Unable to overcome the traditional schema provided by empirical individual psychology, which distinguished between the endopsyche and the exopsyche, while at the same time mechanically uniting them, Kornilov failed to see the dialectical unity of the inborn and the acquired, the biological and the social in human behaviour. It should be noted, though, that Kornilov repeatedly stressed the primacy of the social over the biological, but this recognition did not make any essential difference. It becomes quite clear if, for example, we look through the sections of his *Text-Book of Psychology Rendered from the Viewpoint of Dialectical Materialism* (1929), dealing with instinctive reactions. Kornilov wrote that, though man evidently possesses as many instincts as an animal, they are concealed in him by the acquired reactions. This makes it clear that, for a reactologist, the inherited and the acquired were close to each other in mechanical terms and that the social only overshadowed the biological, while not transforming or mediating it.

It is not surprising, then, that Kornilov interpreted man's mental life in biological terms, turning instincts into the basis of the emotional-volitional sphere of human personality. He derived many moral feelings, including the sense of collectiv-

ism, from the herding instinct, stating that the difference between these human senses and the corresponding emotional reactions of animals was only quantitative.

Reducing the most complicated, high and subtle forms of behaviour to reaction, made reactology very similar to reflexology as concerns the methods. Such reduction of the manifestations of mental activity to reflexes (or reactions) amounts to ignoring the specific in the mechanisms of human behaviour. It is one thing to regard the reflex principle as a theoretical concept of the determination of any manifestations of vital activity (including mental ones) by the impact of the environment, and quite another to try to reduce the complicated forms of social man's behaviour to simple elements, be it reflexes, super-reflexes or reactions. Trying to explain human behaviour by the laws of reaction is erasing qualitative distinctions between the subtlest mental processes and the simplest responses to the irritations from the environment. The fact that the latter are a natural base for the former, does not yet give grounds for reducing the former to the latter.

Still, one must admit that studying Kornilov's works of that period proves that many accusations on the part of his opponents (such as of his "sliding towards agnosticism" or of the "Kantian distortion of the Marxist-Leninist theory of reflection") were not justified. The assertion that Kornilov's errors amounted to attempts on his part to "drag idealist ideas into the sphere of psychology under the banner of Marxism" should be likewise renounced. The efforts of certain philosophers and psychologists to portray Kornilov, who honestly fought for Marxism in psychology, even though he sometimes committed grave errors and miscalculations, as a clandestine enemy of Marxism, were incorrect in principle.

Kornilov's most serious error in the latter half of the 1920s was his idea of the "organic synthesis" of subjective psychology and behaviourism.

After the First and especially after the Second Congress on Psychoneurology, at which he formulated the tasks of creating psychology on the principles of materialism and dialectics,

Kornilov saw the concept of reaction as a kind of battlefield for simultaneously combatting subjectivism and abstraction. He made the concept of reaction central in his psychological system considering it the path to a "dialectisation" of psychology (the state of the soul, the subjective as the subject-matter of psychology were interpreted as a thesis; reflexes and behavioural acts as an anti-thesis, and reaction as synthesis). This proposition revealed the influence of the Hegelian triad—an infatuation typical of many Soviet philosophers and psychologists in that period.

The correct estimate of Kornilov's "Marxist psychology" largely hinged on the answer to the question, whether the synthesis proclaimed by him was actually dialectical. Kornilov's triad underlying his interpretation of the subject-matter and methods to be used in psychology also gave rise to yet another triad, in which subjective psychology was seen as a thesis, objective psychology as an anti-thesis, and "Marxist psychology" as synthesis.

Kornilov's aim can be understood and assessed positively: he wished to determine the place "Marxist psychology" should occupy in the historical process of the evolution of psychological scientific thinking. The importance of this aim becomes clear in the light of Kornilov's struggle against Sergei Minin, E. Yenchmen, disciples of Vladimir Shulyatikov and the Proletculturists who rejected all continuity between old and Marxist philosophy, between bourgeois and proletarian culture. Lenin, as is known, derided such a vulgar, non-dialectical interpretation of the link between the old and the new. Kornilov was one of those who understood this. He was also correct in that the pre-Marxian period was characterised by a conflict between subjective psychology, which abstracted the psyche from matter and turned it into an independent substance, and objective psychology, which just ignored the mental. Kornilov correctly noted the onesidedness of each of these trends and renounced it as futile. It was also clear that genuinely Marxist psychology could not be created out of nothing or by an anarchist negation of accumulated past experience: it could

only emerge through a dialectical elimination, through the negation of opposing trends in bourgeois psychology.

However, Kornilov, in accordance with the abstract schema of his triad, effected the synthesis between subjective and objective psychology artificially, in a formal way, through a compromise. The main vice of the "organic synthesis" in reactology was not that the subjective, mostly Wundt's system, was recognised to be the thesis of contemporary psychology and behaviourism the anti-thesis, but the form rendered to their synthesis. Before implementing this synthesis, Kornilov should have brought to light and overcome the idealist and mechanist premises of both subjective and objective psychology because otherwise he was bound to magnify, rather than overcome, the errors inherent in both trends. Indeed, the fault of bourgeois subjectivism and objectivism in psychology did not consist only in their onesidedness, as Kornilov stated.

At the stage under review, Kornilov and his associates were still far from understanding the organic vices of the schools and trends of psychology which they synthesised employing the concept of reaction. A painstaking joint effort in the field of methodology was required on the part of all Soviet psychologists (Kornilov among them, of course) to fulfil the task of Marxist restructuring in the discipline of psychology.

The significance of the discussion on reactology, as well as of the debates on major methodological problems of reflexology in Leningrad, went far beyond the tasks formulated by their initiators. Within the context of the advance of socialism, the philosophical dispute directed against mechanism and idealism and the debate over psychology closely related to it, resulted in a radical turn in the very foundation of scientific psychological theory: Soviet psychology renounced the vestiges of idealism and mechanism in the interpretation of the subject-matter of psychology.

Theoretical statements made during those years clearly testify to the fact that psychologists realised the invalidity of the erroneous methodological positions which were recently defended by reflexologists and reactologists. The subject-matter

of psychology was also revised, which was very important. And though the debate of psychologists in 1930-1931 is known in history as focussing on reactology, it actually served as a factor essential for completely overcoming reflexology. This can be explained by the fact that reactological psychology, which seemed to be an opponent of reflexology, actually served to corroborate it with its own eclecticism and mechanism. Reactology shared many methodological mistakes typical of reflexology (behaviourism, positivism, hyperbolisation of the role of laboratory methods of investigating man's mental life, etc.).

The main thrust of the debates during 1930 and 1931 consisted in the assertion of consciousness as the subject-matter of Marxist psychology. As was noted, representatives of behavioural psychology (reflexologists and in particular reactologists), declared human behaviour to be the subject-matter of psychology. However, they did not discard the psyche altogether but accorded it an auxiliary and secondary role, regarding it as only a complementary element of the object studied by psychology. It was evidently necessary to provide a valid interpretation of consciousness describing it from the positions of dialectical materialism on the one hand, and on the other, overcome the interpretation of mental processes currently adopted in reflexology and reactology.

The interpretation of mental life as an introspective (or subjective) reflection of objective physiological processes, widely spread in the latter half of the 1920s, was severely criticised. We find a correct statement in theoretical articles published in the early 1930s to the effect that such an interpretation is tantamount to an identification of mental processes with the material (physiological). Apologists of behaviourism actually eliminated the psychical from the subject-matter of psychology. They saw psychology's object in studying the behaviour of individual man or a collective (class) and therefore usurped the subject-matter of another discipline—sociology, or the science of society. They also trespassed the borders of another science, e.g. physiology, by reducing mental life to physiological processes.

In widely drawing, in the course of polemics, on the works of the founders of Marxism (*Philosophical Notebooks, Materialism and Empirio-Criticism* by Lenin, *The German Ideology* and *The Holy Family* by Marx and Engels, *Dialectics of Nature* and *Anti-Dühring* by Engels), psychologists were able to introduce a new meaning into the terms of the psyche and consciousness, drastically different from the sense rendered to these terms by idealist philosophers and psychologists. Soviet psychologists did not discard the concepts which were a kind of tradition with subjective psychology and which were turned into a bogey by supporters of objectivism in setting themselves the clearly-formulated task to free psychological concepts from idealism and revise rather than discard these concepts from the angle of dialectical materialism.

Psychologists began to realise that the lack of knowledge concerning the history of science would result in errors in the definition of the subject-matter and method of a scientific discipline, and its historical place in the system of other sciences.

Vygotsky provided a profound analysis of the history of the current stage of psychology in several works, beginning with his *The Historical Meaning of a Psychological Crisis* (1927) and ending with a report in June 1932, entitled "Modern Trends in Psychology". Both of these works are permeated by one thought: up to the recent time, it had been supposed that mental life can be approached in two ways—by explanation of it in physiological terms and by psychological descriptions. However, both of these ways led to an impasse.

Was there a way out? Vygotsky said that the beginning of the 20th century witnessed the division of psychology into two disciplines: explanatory psychology and descriptive psychology. The first traces the links between phenomena in mental life and their connection with those outside this circle. It also studies what underlies them, their structure, the laws governing them. This kind of psychology must be built largely along the same lines as natural sciences. It inevitably becomes a physiological discipline, because, as he delves into the causes of mental phenomena, the researcher would

willy-nilly turn to material processes. This discipline is powerless to penetrate the complicated states of consciousness. The second kind of psychology is concerned with understanding man and penetrating his sensations rather than interpreting and explaining them. Such psychology can be called comprehending (or descriptive) according to its tasks and vitalistic (idealist), according to its methods. The crisis, which had set in in psychology at that time and which was reflected in this dualism of psychology, was essentially a crisis of its methodological foundations. It revealed that the science of psychology, seen in the light of demands made on it by practice, had overgrown the opportunities it enjoyed within the bounds of those methodological foundations on which it was built initially, in the late 18th and early 19th centuries.

Vygotsky emphasises that an attempt to overcome the dualism of physiological explanation and spiritual penetration was launched by the Gestalt psychologists Max Wertheimer, Wolfgang Köhler and Kurt Koffka. It was doomed to failure because these psychologists wished to rise "above the conflict" between mechanism and vitalism, while remaining captives of limited non-dialectical notions concerning the substance of the two philosophical trends. An analysis of the mechanism of explanatory psychology by representatives of structural psychology (this was how Vygotsky referred to Gestalt psychologists) enabled him, through criticising the critics of mechanism, not only to expose the inadequacy of the methodological principles of Gestalt psychology, but also to demonstrate the organical invalidity of objectivism inherent in explanatory psychology. Moreover, Vygotsky convincingly proved that structural psychology embraced both the mechanism of explanatory psychology and the vitalism of descriptive psychology, while not overcoming dualism and only shifting it from the external into the internal medium of the scientific system.

The final conclusion arrived at by Vygotsky was that the very foundation of psychology should be built anew. This he saw as the only way out of the crisis. At the same time he demonstrated that the modern trends of bourgeois psychology,

among them structuralism, had no right whatsoever to claim the role of a guide capable of leading psychology, entangled in the tenets of mechanism and vitalism, onto the smooth path of scientific knowledge. Explanatory psychology in all its varieties (Wundt's physiological psychology, James's functional psychology, behaviourism, reflexology), as well as various schools of descriptive psychology (the "mathematics of the spirit" of Wilhelm Dilthey, the intuitionalism of Henri Bergson, Husserlianism, the "psychology of the peoples" of Wilhelm Wundt) and their synthesis carried out by Gestalt psychologists—all rely on the basis of bourgeois ideology and are therefore incapable of overcoming their historical limitations. The history of psychology demonstrates that the very foundations of scientific theory must be radically changed and that the Marxism's "coexistence" with the vestiges of objectivism, tolerated at the previous stage, had now become impossible.

In these works, Vygotsky does not touch upon the question of the restructuring of psychology (he did not set himself that task). However, he expressed his disagreement with how that restructuring was understood by West European and U.S. psychologists. The material provided by Western psychological science was also critically analysed by Luria in his article, "The Crisis of Bourgeois Psychology", in which he firmly opposed efforts to assimilate psychological theories uncritically, without having any notion of their underlying philosophical conceptions and the social trends they are connected with. Prior to the "turning-point" in psychology, Soviet psychologists tried to find "allies" and "fellow-travellers" in diverse Western systems of psychology, which they hoped to set right and improve and then apply for their own purposes. In the new setting, however, they assessed these theories in a different way in principle. In analysing the numerous theories of Western psychology, Soviet psychologists came to the conclusion that all these trends, though each promised an original method for discovering the chief laws of the personality's mental life, inevitably turned to the immanent "powers of the spirit", the "factors of integrity", as a final motive force of evolution. This

generally resulted in creating sophisticated metaphysical systems that actually blocked the path to genuinely scientific research.

Beginning with 1931, a new interpretation of the subject-matter of psychology prevailed. It was based on the Leninist theory of reflection. Psychology was now understood as a science of the psyche, consciousness as a property of the brain reflecting objective reality. This formulation remains in force even today. It was the result of a comprehensive, non-formalistic overcoming of all types of behavioural psychology as a manifestation of vulgar objectivism and mechanism.

The debate on reactology took place in the contradictory conditions of the 1930s. Its participants set themselves a common task—criticism of behavioural psychology. However, they were not free from subjectivism in assessing various representatives of psychological science and often substituted various "labels" for a concrete analysis of certain theoretical views. Still, even if we consider the polemical cruelty characterising some of the reports and statements by the participants in the discussion, we cannot but recognise that this forum, at which the fate of psychological science was decided, greatly facilitated its development. The debate, of course, unleashed the creative activity of those working in the field of psychoneurology, rallying them still closer around the Marxist-Leninist teaching.

The debate on reactology constituted a certain landmark in the history of Russian psychology. It marked the end of the period of the domination of objectivism and behaviourism and the beginning of the period when dialectical-materialist psychology was established. Tribute for the tremendous theoretical work accomplished during the 1930s should be paid to Bassov, Blonsky, Vygotsky, Alexei N. Leontiev, Luria, Rubinstein, Uznadze, and many other Soviet psychologists.

Developments in different branches and departments of the science of psychology proceeded not uniformly and at varying speeds. The establishment of the theoretical foundations of the psychology of labour, of the child, pedagogical, forensic, so-

cial psychology was characterised by certain specifics in each case. But one thing is clear: this most productive process was made possible only because Soviet psychologists had done a very great amount of theoretical and methodological work over a relatively short span of time after the Great October Socialist Revolution.

Chapter Seven

CHIEF TRENDS AND METHODS OF RESEARCH IN PSYCHOLOGY IN THE 1920s-1930s

The latter half of the 1920s-early 1930s, was characterised by major shifts and changes resulting from intensive scientific development. Typical of that period was the contradiction between the need of establishing psychology on the basis of Marxism felt by the majority of Soviet scholars and their desire to actively participate in the socialist construction, on the one hand, and the as yet low level of their knowledge of Marxist theory, which interfered with the realisation of their desire on the other. For a long time, they could only work on the approaches to a Marxist psychology. The period we are now considering was marked by the expansion of research into all branches of psychology and the introduction of psychological knowledge in many areas of the national economy, culture and education. Dissemination of psychological knowledge was organised on a large scale. Theoretical debates on the subject-matter of psychology met with a broad response from both psychologists and representatives of all other sciences closely related to psychology. A vast psychological literature was published. Never before nor after that period, I think, was the belief in the boundless opportunities of psychological research so great. Regrettably, psychologists themselves, as well as those who formulated the "social order" for the discipline of psychology, substantially exaggerated real possibilities at the disposal of the young Soviet science. Psychologists often assumed unrealisable obligations and claimed the role of oracles when they could hardly cope with that of modest consultants. Later, in the early 1930s, all their "promissory notes" were protested, so that the

belief in psychology's omnipotence was shattered. The first two decades of the evolution of psychological thought after the October Revolution graphically revealed that to create the theory of psychology and successfully introduce it into practice would only be possible as a result of creatively mastering the Marxist-Leninist teaching.

At the same time, the wide scope of psychological research, even though its results hardly coincided with the proclaimed intentions, served to provide for the establishment of a whole fund of scientific papers. These became a reference-point for the subsequent elaboration of a number of concrete psychological problems in the field of general, child and pedagogical psychology, psychology of labour, pathopsychology, etc. During this period, the cadres of psychologists emerged, research methods were specified and the main branches of psychology demarcated. Numerous psychological laboratories were set up, journals and other periodical literature were published which clarified psychological problems, and a large-scale work was organised to critically revise many propositions of empirical and objective (natural-science) psychology inherited from prerevolutionary times.

Before tackling the question of psychological methods and the major branches of psychology, let us cast a glance over the general pattern of psychology's development in that period, pointing out its typical specific features resulting from the above-mentioned objective contradictions. Later, we shall deal with all these problems in greater detail.

At that time, a great number of books were published, in which efforts were made to sum up major problems of psychology, both as a whole and by the branch, from the angle of materialist interpretation of the subject-matter of psychological studies. The psychological literature, published in those years in Russian, ranked third in the world (after that published in English and German). Alongside large editions of original Russian books on psychology, many translations were also published, such as the works of John Watson, Ernst Kretschmer, Kurt Koffka, José Ingenieros, Leander Jameson, Wolf-

gang Köhler, William Stern, Jean Piaget, and many others. Soviet psychologists were well versed in Western psychology and its major trends. Many maintained personal contacts with foreign scholars (e.g. Koffka, Köhler, Watson, Stern), invited them to the Soviet Union, published their own works abroad,[1] and took part in international congresses and conferences. Vygotsky, V. N. Kolbanovsky and other Soviet psychologists wrote prefaces to foreign monographs translated into Russian, which are of considerable scientific value and can be justifiably regarded as independent articles containing serious historical-critical comments on the corresponding psychological systems.

Psychologists actively contributed to various periodicals, sending their articles to philosophical and socio-political journals, as well as to popular-science and bibliographical periodicals. Though there were not many psychological periodicals in those years, psychological problems filled the pages of dozens of journals. Hence, to get a full idea of the diverse lines of research pursued by Soviet psychologists in that period, one should study the entire mass of periodicals issued in Russia, since only this kind of analysis can enable one to outline the main contours of the theoretical and practical activity of Soviet psychology in the initial period of its development. Thus, we see that psychologists enjoyed vast opportunities for propagating their views and informing the public of the achievements and difficulties they faced in the course of their work.

At the turn of the 1930s, research work in the sphere of psychology and the training of the cadres were concentrated in the following centres:

The Moscow Psychological Institute (the State Institute of Psychology, Pedagogy and Psychotechnique). From 1923 to 1931, the post of its director was held by K. N. Kornilov. V. M. Borovsky, A. R. Luria, A. B. Zalkind, T. L. Kogan,

[1] Thus, P. P. Blonsky published 10 articles on child psychology in foreign periodicals over 1928-1930, which met with a broad response in psychological and pedagogical periodical literature abroad.

V. N. Kolbanovsky and B. M. Teplov also took an active part in the Institute's administration. In 1931, the Institute's body of research workers also included V. A. Artyomov, P. P. Blonsky, L. S. Vygotsky, S. G. Gellerstein, N. F. Dobrynin, P. A. Rudik, L. M. Schwarz, P. A. Shevarev. There were 37 postgraduates in 1931. The Institute had departments of general and experimental psychology, child psychology, animal psychology, and of applied psychology.

The structure of the Institute departments underwent a change after the debate on reactology. Now it had the following sectors: psychotechnique, pedagogical psychology, pedology with the defectology subsector, general psychology (and a subsector of psychology of creative activity attached to it), and comparative psychology and physiology of animals. The Institute's new structure testified to the fact that there was greater interest in psychology of creative activity and that priority among all the sectors was given to psychotechnique. This was understandable, since it was linked with the task of reconstruction faced by science and its use for the achievement of the most urgent objectives in industry, agriculture and labour organisation.

The Institute on Studying the Brain and Mental Activity in Leningrad. It was founded in 1918 on the initiative of Bekhterev, who was its director up to 1926. Upon Bekhterev's death, the post of director went to V. P. Osipov. Among the Institute's associates were B. G. Ananiev, V. M. Myasishchev, I. F. Kurazov, A. L. Shnirman and other psychologists and physiologists. For a number of years, the Institute was the centre of reflexological psychology in the country. Beginning with 1928, however, there occurred a change in the formation of its ranks: many reflexologists renounced mechanicist attitudes in psychology. After the methodological discussions of the early 1930s, the Institute concentrated on the problems and issues involved in school education, vocational-technical training and polytechnisation of schools. Thus, the Institute became involved in pedagogical research. Among other topics included in the Institute's work schedule (mainly connected with

studying the brain and mental processes), were the following: "Talent and Mental Development and Their Importance in Polytechnical Education", "The Problem of Labour and the Brain and Its Significance for Labour Productivity". The sector of psychopahtology and neuropathology, engaged in studying the mechanisms of pathological processes, concentrated on difficult and retarded children and their polytechnical training. The sector of psychology and pedology dealt with two problems: 1) perception and thinking, and 2) the problem of personality in psychology. In particular, researchers in that sector studied the problem of perception and thinking in schoolchildren in connection with the memorising of academic material and also the problem involved in the psychology of pedagogical influence and assessment. They also investigated the rhythm and rate of the pupils' work in workshops and proved that these were neither inborn nor stable under conditions of socialist labour. They analysed the scope of the intellect of the students. The sector of comparative physiology and comparative psychology was one of those not immediately concerned with pedagogy. It was engaged in studying the behaviour of animals at different stages of evolution.

The Communist Academy in Moscow had a psychoneurologcial department included in the section of natural and exact sciences (it was organised in 1925). The Society of Psychoneurologists-Materialists worked under it (chaired by A. B. Zalkind). Actively engaged in the Society were Vygotsky, Kornilov, Kolbanovsky, Luria, Chuchmarev, and others. The department's work in 1928 and 1929 proceeded in two main directions: first, it elaborated general methodological problems involved in the psychology and physiology of higher nervous activity (concrete psychophysiological issues were studied at a special Institute of Higher Nervous Activity, also under the Communist Academy). Second, it investigated problems of social psychology. The studies of social psychology, which were carried out at an experimental station at the Goznak factory (in particular, the impact of labour processes on the psyche) were regarded as the most important part of the

Communist Academy's activity in psychoneurology. The psychoneurological department maintained close ties with the Moscow Psychological Institute: they elaborated a number of problems in common (the history of psychology, issues of social psychology, etc.). In 1932, a new institute—the Institute of Psychoneurology—was established, included in the system of the Communist Academy, by merging the Institute of Higher Nervous Activity under the Communist Academy and the Institute of the Brain under the People's Commissariat of Public Health.

Vygotsky and Luria guided psychological research carried out in the N. K. Krupskaya Academy of Communist Education, in which A. N. Leontiev, P. A. Rudik, M. S. Lebedinsky, B. V. Belyaev and others actively participated. Both the chair and laboratory work was centred around problems of pedagogical psychology. Processes involved in the vocal intellectual activity were also studied by methods of experimental psychology.

A considerable volume of investigations made in the Academy by psychologists was united under a common theme: the study of a child's cultural development level based on Vygotsky's theory of the development of higher mental functions. Specific features of thinking and speech in children of various age were studied, as well as the role of speech for the child (Vygotsky), the forms of using external signs in the behaviour of children (Luria), the forms of "natural" and "cultural" memory in children of different age groups and in different social media (Leontiev). As they tried to disclose the dynamics of neuropsychological processes in children of different ages and under different conditions, Luria and Lebedinsky applied so-called "conjugate motor methodology" and substantially promoted the knowledge of age psychology. The chair of psychology closely cooperated with the centre of school pedology led by P. P. Blonsky.

The Ukrainian Psychoneurological Institute, which was set up in Kharkov in 1921, with A. I. Geimanovich as director. V. P. Protopopov, K. I. Platonov, I. A. Sokolyansky were

among its most prominent research workers. The Institute was engaged in studying both normal and impaired personality. A wide range of questions were included in its plans of investigation, concerned with particular problems of psychology, psychiatry, psychotherapy, psychohygiene, defectology and neurology. In that period, the Institute was the centre of psychoneurological research in the Ukraine. It maintained close ties with the psychoneurological institutions of Moscow and particularly of Leningrad, and was also widely engaged in publishing. The chief trend supported by its staff in those years was reflexology. It was largely on the initiative of Ukrainian reflexologists working at the Psychoneurological Institute that reflexology was introduced as a regular discipline taught in the Ukrainian higher educational establishments in 1925-1929, while psychology was struck off the list. Subsequently, the Institute was transformed into the All-Ukraine Psychoneurological Academy. In the first half of the 1930s, when a group of young researchers led by Vygotsky joined its staff, the Institute workers as a whole overcame their former infatuation with reflexology.

There were numerous scientific-pedagogical centres working in the Soviet Union, the most outstanding among them being the Institute of the Methodology of School Work, which was merged in 1924 with the Central Institute of Pedology, where problems of child and pedagogical psychology were studied under the guidance of N. A. Rybnikov. Among the most active research associates were A. S. Bernstein, Z. K. Stolitsa, G. A. Fortunatov, A. M. Shubert. The Institute organised a number of commissions on children's reading, natural experiment, babyhood, childhood, pre-school age, etc.

Scientific-research and theoretical-methodological investigations were also conducted at teachers' colleges and pedagogical institutes. Prominent among such centres was the pedagogical faculty of Moscow State University (it had later branched off into the V. I. Lenin Moscow Pedagogical Institute), where psychological studies were led by Kornilov, and the Herzen Pedagogical Institute in Leningrad, where M. Ya.

Bassov, A. P. Boltunov, S. L. Rubinstein and other psychologists were active.

This short survey of the psychological scientific research centres operating in the 1920s and the first half of the 1930s, does not embrace scientific-research institutions specialising in psychotechnique, psychopathological laboratories, cabinets on criminal studies, and other such units.

All this demonstrates that by 1933 Soviet psychologists had a broad and smoothly functioning network of scientific research establishments at their disposal, which were adequately equipped for conducting successful scientific investigations (laboratories, apparatuses, the cadres, training institutions).

Methods of psychological research were given special attention by Soviet psychology in those years. More than five hundred special publications were devoted to this problem. They were discussed in this or that form in various textbooks, manuals and general courses on psychology, pedagogy, pedology, psychotechnique, psychopathology. Such great interest in the problem of methods is not surprising. On the contrary, it is justified at a time when the chief principles of a discipline are established and its subject-matter is defined. The latter was always closely linked with the question of methods to be applied in practical psychological work. The polemics between the major trends of psychology which existed in that period (reflexology, reactology, psychoanalysis, etc.) gave a particularly sharp edge to that problem. Each of the trends in psychology propagated its own methods while deriding those of the opposing trends. In each case, when the question of methods was raised, the practical goals set by the branch of psychology in which a given author worked were reflected.

The chief method of empirical psychology—introspection (or simple self-observation)—lost its significance in the 1920s and was sharply criticised in the works of Kornilov, Blonsky, Vygotsky and other scholars. While in the main repeating the well-known arguments against introspection as a method of investigating mental processes formulated by Kant, Herbart

and Comte (distortion of the process under observation, insurmountable subjectivism, the difficulty and even impossibility of investigating by such methods the psychology of children, animals and mental patients), these scientists were as yet unable to interpret the introspective method as a way of realisation of the general position of idealist psychology, according to which mental life was viewed as a closed-in internal world. This in principle can be only fathomed by introspection. That was the reason why they could not provide a serious scientifically-based criticism of self-observation as a method of psychological investigation.

Experimental self-observation accepted by the Würzburg school (Helmuth Hug, Oswald Külpe, Karl Marbe, August Messer) and actively propagated in Russia by representatives of empirical psychology, in particular by Chelpanov, met with almost the same negative attitude. The majority of Soviet authors were of the opinion that the Würzburg school failed, despite all its attempts to impart a scientific look to experimental self-observation, to eliminate a single defect typical of self-observation in general. They felt it even aggravated these defects because it made very complicated demands on the act of self-observation which could be complied with only by those who had a serious psychological education.

In the final assessment of the possibility to apply the method of self-observation and of its scientific nature, there was a divergence of opinion between reflexologists who denied that the data received through self-observation had any importance for characterising human behaviour, and psychologists headed by Kornilov. The latter group of psychologists regarded self-observation as an auxiliary method. Their position was explained by the fact that, on the one hand, they tried to separate themselves from reflexology which completely ignored self-observation, and, on the other, from empirical psychology which claimed self-observation as the chief and the most dependable psychological method. Kornilov stated that self-observation deserved serious criticism and that it should be applied only under the control of other methods, and only if there

were no other ways of learning of man's innermost state. He thought that the only acceptable form of self-observation was the method of verbal account (Watson called it a concise report by the person under study of his inner state caused by external influences, which serve to check the authenticity of his information). Vygotsky thus described the value and relevance of the method of verbal account in scientific investigations: "The question of the scientific value of self-observation is to be answered in the same way as that of the practical value of the court statements of the victim and the culprit. Both are biassed—we know this *a priori*. Of course, they contain some lies and may even be completely false. Therefore it would be sheer madness to rely on them entirely. But does it mean that we must not at all listen to them during the trial and only interrogate the witnesses? That would be also unwise. We should listen to the culprit and to the victim, check upon and compare their statements, and then turn to material evidence, documents, traces of the crime and to the testimony of the witnesses—this is how we establish the facts."[1]

The attitude towards the problem of self-observation typical of Soviet psychologists at the turn of the 1930s was determined by such factors as the earlier polemics with subjective psychology and reflexology and the effort to push to the background subjective methods of research and replace them with objective methods. The scholars were at that time not yet sufficiently versed in Marxist analysis to be able to correctly resolve the problem of self-observation from the point of view of theory. Much later, in 1952, B. M. Teplov proved that the very posing of the question of self-observation by psychologists at that time was basically erroneous (they recognised self-observation not as the only or even chief method of psychology, but as one of indispensable and important methods), since in actual fact self-observation cannot be treated as a method of

[1] L. S. Vygotsky, "Methods of Reflexological and Psychological Investigation", *Problems of Psychology*, Leningrad, 1926, pp. 45-48 (in Russian).

scientific psychology, though the data of self-observation, i.e. the material obtained through verbal accounts of those under investigation, is an essential object of research in psychology.

Association experiment, the methods of psychoanalysis and questionnaires were closely related to self-observation.

Associative experiment (or the method of verbal associations), suggested by Wundt and Jung, was interpreted in different ways by representatives of different psychological trends—reflexologists, reactologists and psychoanalysts.

Reflexologists (A. K. Lents, A. G. Ivanov-Smolensky and others), paid attention primarily to the analysis of the vocal reactions and their relationships with word-irritants, as distinct from empirical psychologists who assumed that the method of verbal associations was a more or less dependable means for the "free expression" of the spiritual state. Thus, in the opinion of reflexologists, the method of verbal associations approached objective methods (in working out verbal or vocal conditioned reflexes). The conjugate motor methodology proposed by Luria in the mid-1920s, was the most productive kind of objective investigation with the assistance of association experiment. This methodology in many respects overcame the subjectivism of the traditional method of verbal associations.

The conjugate motor methodology was applied in studying affective reactions. The person under examination was presented with a word-irritant. He was immediately to provide a verbal answer, based on his first reaction, and simultaneously to press the buttons on a pneumatic receiver. "It was suppossed that this motor reaction, conjugated (or conditionally connected) with the verbal answer, would reflect the dynamics of the vocal reaction and that the curve of the motion recorded by the kymograph, would reflect in different ways simple cortical inhibition or a delay in the vocal answer, which was on the tip of his tongue but which for some reason the person being tested did not wish to pronounce. And finally, it would reflect the effective disorganisation of associative processes

which may set in in the clearly-defined states of affect."[1] This methodology was applied in investigating associative reactions of neurotics, students during examinations, and of criminals. Experiments performed on various categories of persons being tested (for example, on criminals) showed that the motor reaction conjugated with the verbal one not only confirms and hence controls the latter, but also discloses some moments in the behaviour which cannot be observed in verbal reactions. The conjugate motor methodology met with a substantial response in Soviet and foreign research in subsequent years.

In the psychoanalytical trend, association experiment assumed an entirely different character. (I. D. Yermakov, M. V. Wulf). Psychoanalysts (with the exception of Joachim Jung), as a rule, did not present the person being tested with some word-irritants and allowed him to freely say whatever came to his mind, without subjecting this flow of words to any control by consciousness (the method of *Freie Einfolle*). Psychoanalysts' exaggerated attention to free associations was explained by their recognition of unconscious complexes, which allegedly were thus freely expressed and could be deciphered, as the dominant principle of mental life. The critical examination of the psychoanalytical method undertaken in the latter half of the 1920s and even in the early 1930s, did not reveal the ties between the essentially idealistic interpretation of mental life in Freudianism and the subjective nature of the *Freie Einfolle* methodology. Many psychologists, who criticised the psychoanalytical variety of association experiment, recognised the main danger of this methodology to be in its asocial character (the real social medium was replaced by artificially conceived questions or far from objective explanations) and its orientation on revealing sexual affects and conflicts (the libido), while in fact ignoring the introspective substance of the psychoanalytical method.

The labour method was mainly applied in the psychotech-

[1] A. R. Luria, "Psychology in Determining the Traces of the Crime", *Scientific Word*, 1928, Vol. 3 (in Russian).

nique and psychology of labour. A psychologist himself learned the trade which he intended to describe in psychological terms (its analogue at the present time is the method of switched-on observation). The First All-Union Conference on the Psychophysiology of Labour and Vocational Selection (June-July 1927) adopted a resolution which stated: "With a view to collecting as much professiographical material as possible, to recognise the expediency of utilisation of all methods which can provide positive information concerning a trade in case of those trades that allow it by force of their production specifics. To recognise as especially valuable the application of the labour method in the first turn." The labour method, of course, possessed certain positive features, stemming largely from the psychologist's immediate acquaintance with specific aspects of a particular labour activity. However, even at that time it was noted that, as a variety of self-observation, the labour method could not be completely free of subjectivism. Moreover, the data obtained through the self-observation of a well-educated adult who mastered a trade (of a tram-, engine- or automobile driver) in the course of about 2-8 weeks would be far from identical with the actual process of the formation of skills and work habits in an uneducated worker who spent several years to master the particular trade.

Questionnaires became the most widely used psychological method. The questionnaires were extremely varied, since their purpose was to collect extensive material on human behaviour through the mass surveying of people. The goals psychologists set themselves in these surveys were indeed diverse—a wide range of questions touched on matters of age and pedagogical psychology, psychotechnique, bibliopsychology, etc. which were to be resolved by this method. The very concept of the "method of questionnaires" was at that time interpreted in very broad terms. It included not only "oral questionnaires" (essentially, the method of conversation) but also Jean Piaget's clinical method whose chief aim was bringing to light spontaneous statements by tested children.

Questionnaires served to facilitate a detailed elaboration of

methods which are applied in various surveys to this day, particularly with respect to oral questionnaires (those which establish confidence between the testor and the testee, recording information, abstaining from leading questions, etc.). The scrupulously elaborated technique of conducting a conversation, thoroughly conceived and based on the knowledge of psychology, was reflected in the works on criminalistics.

The biographical method (at that time it also included what is now called the method of studying the products of activity), was regarded in the 1920s as very productive and in time with research into human personality as a whole, since it traced the dynamics of behavioural development and effectively rendered the influence of social factors on behaviour. It used, as material of research, letters and all kind of diaries, biographies, objects of children's creativity and handwriting. The actual significance of the methodology hinged primarily on how objective was the content of the materials thus obtained.

The method of observation (or of immediate psychological observation) is closely related to the biographical method. However, the sphere of its application in psychological investigations performed in the period under review was much wider, and the role assigned to it much more important. In characterising the role and significance of the method of observation, psychologists usually resorted to the authority of José Ingenieros, who held that the observation of thinking, living creatures was the most productive method of psychology. External observation, he said, was the only method which can be successfully applied to all forms of development of the mental function. The method of observation could be applied on a broad scale in comparative, collective, child and pedagogical psychology, as well as in its other branches. The attraction of the method of immediate observation can be explained by the effort to consider the "social moment", the "social factor", typical of the majority of psychological works at that time, since it made it possible to study a particular person in con-

crete social, everyday and labour situation rather than an "abstract personality", a "Robinson Crusoe of traditional psychology".

Awareness of the importance of the method of immediate observation for psychology facilitated profound psychological demands and clarification of the best conditions for its application, specification of the way of recording the results of observation, and of developing the power of observation. It would be no exaggeration to state that many experimental investigations conducted by Soviet psychologists over the recent years owe their accurate performance to the high degree of the culture of observation which evolved in Russia during the 1920s-1930s.

Major contributions to the elaboration of the methodology of immediate observation (in particular, of children) were made by Kornilov, Boltunov and Bassov. They made great efforts to guarantee maximum objectivity in employing this method. Boltunov, for example, worked on the problem of the observer's culture. Bassov was engaged in elaborating the problem of the techniques of recording observations. In their works, these psychologists reflected the complicated question of complete objectivity on the part of the observer (abstention from expressing his own opinion, conjectures, subjective assessments, bias) and the formulation of a definite goal of investigation which in the final account inevitably presupposes a certain theoretical premise of the observer. In the period under consideration, this difficult problem was not resolved because of the then level of psychological knowledge; moreover, it was not even clearly formulated. Thus, Boltunov stressed that the success of scientific research largely depended on how well the researcher presented the objectives rather than on the availability of factual data, the idea being that it was not a difficult problem to provide the latter. Evidently he did not realise the ambiguity of his remark. Only in the late 1930s did S. L. Rubinstein propose the correct interpretation of the correlation (the unity, to be more precise) of the objective and the subjective in the method of observation, emphasising

the role of a hypothesis. Observation, he maintained, became fruitful in scientific terms insofar as it was used to set and verify hypotheses. The division of the subjective interpretation from the objective is effected in the process of observation itself, which is combined with the formulation and verification of a hypothesis.

Among the debated issues linked with the problem of objective observation, the question of the scope of observations was prominent. As they disagreed with Bassov, who demanded observation to provide photographical completeness, Boltunov and other psychologists pointed out that such blanket observations were purposeless and practically impossible and that infatuation with photographical precision would only serve to distract the observer from his immediate goals. It should be noted that both parties to the debate failed to rise above the behavioural concept of observation in their discussion of whether the behaviour of the person observed should be registered in all its details or not. As a result, they were prepared to restrict the goals of the observer to a full or a selective fixation of external reactions, while leaving in the shadow the psychological content of the observed action (what is meant here is the theoretical concept, since in actual observation, even orthodox behaviourists did not ignore the internal content).

The classical method of empirical psychology—laboratory experiment—also met with a measure of caution. The general attitude toward it was contradictory: on the one hand, it was seen as a continuation of subjectivist experimentalism, linked with the names of Wundt and Chelpanov. On the other, there was a marked tendency to use more widely laboratory research and even to universally apply it in practical activities involved in general, pedagogical and social psychology. Thus, Kornilov stressed that while not so long ago it was thought that far from all sides of the human psyche could be examined experimentally, at that time (i.e. in the late 1920s) it would be difficult to find a branch of psychology in which experiment could not be used and did not produce

positive results. The possibilities of concrete experimental methods, however, were sometimes exaggerated: each method claimed to be effective in tackling practically any problem of psychological investigation.

Experimental psychology acquired a very valuable new method in that period—the method of conditioned reflexes,[1] which was brought out of the narrow framework of physiological studies and adopted by psychology as one of its objective methods of research. Since the mid-1920s, this method of conditioned (combinative) reflexes was applied in psychology to the same degree as in physiology and was accepted as an instrument of laboratory experiment. Together with the classical secretory methodology elaborated by Pavlov who formulated the principles of conditioned reflex studies, Bekhterev's defensive-motive methodology was also utilised, as well as the motive-digestion methodology suggested by N. I. Krasnogorsky, Z. I. Chuchmarev and others. The vaso-motor methodology proposed by I. S. Tsitovich, the motive-orientation methodology worked out by A. G. Ivanov-Smolensky and the catching method, close to the latter, which was put forth by R. Cheranovsky and other psychologists. An important contribution to the conditioned reflex method was made by research into vocal reflexes performed by Ivanov-Smolensky, in which vocal irritation was applied, and investigations carried out by A. K. Lents and V. V. Savich, who studied involuntary motor reactions to various signals augmented by verbal orders, or "directions" (Lents). Utilisation of the method of vocal irritation substantially extended the scope of application of the conditioned reflex method.

Irrespective of how Lents, Savich, Ivanov-Smolensky and other reflexologists interpreted concrete conditioned reflex methods (they raised these methods to the absolute and thought

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[1] The method of conditioned reflexes is not to be confused with the reflex methods. At the end of the 1920s, reflexologists made use of all, or almost all, methods applied by experimental psychology (associative experiments, testing, etc.).

them to be universal), it should be said that their profound, thorough and comprehensive work with diverse methods of conditioned reflexes exerted a marked influence upon the general methodological base of psychology, enriching it with an essentially objective methodology of investigation. Moreover, the elaboration and use by psychologists of the methods which were brought about by physiology, facilitated the drawing together of these two disciplines and the subsequent joint efforts of psychologists and physiologists noted in those years by Pavlov himself.

The so-called reactological method, proposed by Kornilov, was in fact very close to the method of conditioned reflexes, in particular to the motor methodology combined with vocal irritation. In accordance with this method, reactions, which were interpreted as integral elementary acts of behaviour, were studied simultaneously in three aspects: 1) the velocity of the reaction (the chronometric method), 2) the form of the reaction (the motor-graphical method), and 3) the force of the reaction (the dynamometric method). The latter method was for the first time introduced into psychology by Kornilov, who invented a special apparatus for determining the force of reactions (Kornilov's dynamoscope). Though there was visible similarity between many conditioned reflex and reactological methods, reactologists criticised reflex methods because the reflexologists ignored, on the grounds of principle, mental life and consciousness, violated the integrity of human behaviour, and isolated the person being tested from the collective. The reactologists did not do away with all the shortcomings they criticised in reflexologists in a radical way, since the assertion by Kornilov and his associates that the experimenter's instructions could substitute for social experience, as a serious appeal to the consciousness of the examined person, inordinately exaggerated the modest possibilities at the disposal of the reactological method. Nevertheless, it should be recognised that investigations of the force, velocity and form of reactions conducted by Kornilov's group during the period under study were of an undoubted value.

The method of natural experiment, proposed for the first time in 1910 at the First All-Russia Congress on Experimental Pedagogy by A. F. Lazursky, held a position somewhere in between the method of psychological observation and laboratory experiment. It became popular in the 1920s, as it provided an opportunity to bring psychological research into closer contact with real life, in particular in respect to the tasks involved in instruction and education. Initially, it was mainly applied in the area of pedagogical and child psychology, but later it was also spread to other fields of psychology, for example, to psychotechnique.

The natural-experimental method was arranged as follows: spans of human behaviour intentionally organised by an experimenter rather than taken in the spontaneous conditions of their emergence, were subjected to preliminary functional analysis which disclosed the behavioural mechanisms that were to reveal themselves most clearly. Then the observation of the individual mechanisms of behaviour were recorded in conformity with a preset scheme, and the individual manifestations were assessed according to the degree of their development by compiling a special graphical "star" scheme. The latter was intended to graphically demonstrate the degree of development of each separate function (associations, motor habits, instincts, etc.) in each testee as well as the degree of comprehensiveness of his general development. However, in the chief sphere of its application—characterology—the idea of natural experiment, though valuable in itself, could not produce any tangible result because it was used in the main to realise the mechanistical premises of the theory of two factors, which in the final account reduced the personality study to only the disclosure of endo- and exogenous influences. At the same time, such practice found application in pedagogical psychology of that period thanks to the activity of A. S. Makarenko (more on this later) who developed certain promising forms of natural experiment, thus enriching Soviet psychology.

Among other methods used in psychology at that time, was the method of testing which was far apart from all other

methods applied in the study of mental life both as regards aims and scope assumed in all areas of psychology. The method was suggested by U.S. psychologist James McKeen Cattel in 1890, and was subsequently elaborated by Alfred Binet. The method was widely spread throughout the world, including in the Soviet Union, during the first few decades of the 20th century. Testing, which in its origin was one of the types of psychological experiment, assumed the character of a definite assignment, whose fulfilment, assessed in qualitative and quantitative terms, could allegedly serve as an indicator of the perfection of a certain function. Testing assumed such broad dimensions in connection with the application of the methods and conclusions of theoretical psychology to the interpretation of the specific features of human psyche. It developed in empirical psychology under the direct influence of the rising growth rates and complexity of production, the needs of education, etc. Testing was largely used to reveal the totality of the possibilities of the tested person (psychodiagnosis) and exert influence over him (psychotechnique). Hence the two fields in which testing was used most extensively—child psychology and psychotechnique.

The method of testing evolved dozens of types of tests: there were the "classical" tests devised by Alfred Binet and their variegated modifications by Lewis Terman, Theodore Symon and M. V. Sokolov; the so-called "profiles" proposed by G. I. Rossolimo; the tests of Walter Moede and Piórkowski, N. D. Levitov and A. A. Tolchinsky, and many other varieties. Psychotechniques applied tests to identify professional fitness. Pedagogy and pedology pursued the goals of determining the mental age of children being tested, classifying them into ungifted, backward, subnormal or highly gifted. Tests were also employed to determine the children's progress at school. In pathopsychology, "constitutional" and other tests were staged. Among other tests, a prominent place was occupied by those which defined moral development. Tests were also devised to study emotional-volitional mechanisms, motor development, the extent of development of individual func-

tions. In other words, the types of tests were extremely diverse, and not classified according to a single principle.

The propaganda and theoretical substantiation of the method of testing in the Soviet Union is associated with the names of G. I. Rossolimo, A. S. Bernstein, P. P. Blonsky and many other psychologists. They intensified their activity at the time of the First Conference on Pedology (April 1927), which was marked by heated debates on the importance of testing. In May 1927, an Association of Moscow Testologists was set up and a broad programme of action outlined. Practical work was carried out in numerous pedological cabinets at children's clinics, school prophylactic laboratories, cabinets of psychotechniques, etc. Literature on testing in pedagogy and psychology was vast indeed. The majority of those who participated in the discussion at the First Conference on Pedology, supported tests in practice. In January 1927, however, testing was recognised as inadmissible for universal use at a conference on the pupils' progress at school: "The school should not make any far-reaching conclusions relying on the data obtained through testing. The test can be used at school only in an experiment and then at such a school which has certain premises at its disposal that guarantee its correct staging and thus, to a certain degree, its scientific value". S. S. Molozhavy emphasised that testing can provide neither a correct nor objective orientation for a children's collective. Nor can it demonstrate the actual progress of acquiring knowledge and skills by children, or promote in any way "our pedagogical advancement". The resolution adopted on the eve of the First Conference on Pedology by the pedological subsection also revealed serious apprehension as to the application of tests: 1) to recognise as advisable the conducting of research in the field of testing; 2) to regard as inadmissible the use of tests in general schools; 3) to consider testing as possible in individual school councils both for methodological and experimental-practical purposes, conditional on providing the necessary guidance of the relevant scientific-research institution; 4) to regard testing and its research and examinational significance as subject to discussion. At the same

time, Blonsky wrote in the collection titled *Tests:* "The issue of the significance of tests is at the present time under discussion. Some place almost all hope concerning pedology upon them, and others are very close to completely negating them. The question of where tests can be applied is also controversial. Some wish to restrict their use to the estimation of progress at school, while others go much further. The methodology of devising and staging tests is no less disputable."

In her remarks concerning the theses of reports presented at the First All-Russia Pedology Congress, N. K. Krupskaya emphasised: "Tests present the danger of breaking away from real life, of observing not that which is of great significance." Concerning the theses of the reports of Kornilov, Ivanov-Smolensky and Bassov, she stated: "The theses are a counterbalance to the onesidedness of the testing approach. That's good."[1]

The theoretical premises of testing were also criticised. Kornilov counterposed tests to all other methods on the grounds that all other methods were inductive while the method of tests was deductive.[2] Thus, the entire value of examination by testing is dependent on a preliminary profound application of the inductive method. Decisive for estimating the diagnostical value of a test was how it was devised: whether it was the result of serious preliminary work, or just the outcome of approximate, accidental and superficial observations. In Kornilov's opinion, that was the starting-point of the struggle between the two extreme points of view on testology: offhand rejection or no less categorical recognition. "The method of testing is a double-edged weapon," Kornilov noted. "It may provide much valuable material in case of

[1] N. K. Krupskaya, *Pedagogical Works*, Vol. X, Moscow, p. 246 (in Russian).

[2] The concept of testing, according to Kornilov, is a major premise of the syllogism (for example, that a normal child of six must be able to show his right arm and left ear without error). That which is really done by the child is a minor premise of the syllogism, and the conclusion is whether or not his intellect corresponds to his age.

serious inductive substantiation, and vice versa, in the absence of such solid preliminary substantiation, it may turn into a pseudo-scientific game of spillikins, which can often bring enormous harm, since the results of testing often serve to radically change, and sometimes to destroy, the life both of an adult and a child." Thus Kornilov drew the attention of psychologists to the content and logical structure of examination by testing and justifiably noted that its success hinged on the level of scientific experiment and the authenticity of its psychological basis. This remark was of great importance at a time when a vast number of tests were devised which were very far from being scientifically substantiated. However, Kornilov did not touch upon the object of testing, in particular in respect to intelligence tests, whereas this should be the main target in the criticism of testing.

This aspect of testing employed to measure the intelligence quotient was severely criticised by Vygotsky, who conducted an interesting search for dependable psychological methods of estimating a child's mental development by defining his "next development zone". In contrast to tests which were designed to effect a one-time measurement of a child's mental activity, Vygotsky's method implied a strictly defined procedure—to discover how a child fulfils the task he was faced with independently and with the assistance of an adult. The difference between the former and the latter results, according to Vygotsky's method, presented the "next development zone" of the child, a significant aspect of the diagnosis aimed at a prognostication of the child's further development.

The criticism directed at testing at the turn of the 1930s reflected the struggle against the general concept of behaviourism and its recognition of the fact that there existed a simple link between the stimulus and the reaction. It transpired that the tests devised for establishing psychological facts ignored the complex nature of ties between external impacts and responses. For example, when two persons fulfil, or are unable to fulfil, a task assigned them in a test, the significance of this fact and its scientific assessment should be differentiated,

since any achievement or failure can be due to different reasons. The approved tests did not take into account the actual process of personality development, the real content of a person's consciousness. A negative attitude to testing on the part of many scholars was also explained by their objection to the concrete content of the tests borrowed from abroad, and their awareness that the tests can be staged for the purpose of "proving" that the children of wealthy parents possessed a higher intelligence quotient than the children of the working classes.

The critical objections to testing, as a matter of fact, did not constitute a serious obstacle for the broad introduction of mass testing examinations during the 1930s.

A substantial shortcoming in the work of Soviet psychologists was the considerable reduction of the scope of psychodiagnostical research in the mid-1930s as a result of the criticism directed at pedology. Thus work to establish realistic indicators of mental development, intelligence and talent, so badly needed in people's education, was also halted, and the task of professional selection, discovering the handicapped children by defectologists and seeking highly-gifted children that was necessary to introduce a differential approach to pupils, remained unresolved.

Objective observation, laboratory and natural experiments, and other methods served only to provide material suitable for research. Its further use depended on the principle of its interpretation, one of the methods of the "secondary order" being the comparative-genetic method. It consisted in the examination of individual behavioural mechanisms and psychic acts in the process of development and their comparison with similar phenomena observed in other organisms. This method became particularly widespread in animal psychology and child psychology. Kornilov stated that the comparative-genetic method was based on a dialectical approach to studying human behaviour. He noted that the major proposition adopted by Soviet psychology—that neither mar nor his behaviour can be treated in isolation from the environment of which he is

a part and from factors which are responsible for his behaviour—obliges scholars to stick to such a comparative study.

Depending on the origin of the forms of human behaviour, the comparative-genetic method was subdivided into two types: the ontogenesis and phylogenesis. However, since psychology did not fit into the framework of natural scientific disciplines, as Kornilov saw it, the two methods were augmented by a third—the socio-genetic method (exposure of the genesis of psychological factors in the social life of the individual and humanity as a whole). Kornilov's abstract behavioural conception and persistent sociologism prevented him from introducing a genuinely historical approach to the problem of comparative-genetic studies and discovering motive forces behind mental development in changes of social relations, even though his theoretical premises were generally correct.

In the sphere of comparative psychology, the method was applied with particular success by Wagner, who described and used the objective evolutionary method in his work, which consisted in studying the life and comparing the psyche of animals under study with the previous and subsequent steps on the evolutionary ladder of the animal world. Wagner firmly opposed the evolutionary method to the subjective comparative method applied in classical animal psychology, which first and foremost looked for analogies with man: "I think I have the right to assert," he wrote, "that the subjective way of elaborating issues of animal psychology (from man) has no scientific value, just as the conclusions derived from such investigation." By applying the evolutionary method, Wagner conducted a number of valuable investigations in animal psychology both before and after the October Revolution.

The comparative-genetic method played a special role in the psychological doctrine of Vygotsky. In studying the history of evolution of higher mental functions, he saw the chief goal of psychological ("dynamic") analysis as replacing the analysis of an object or a phenomenon with that of a process and tracing all stages of its evolution in genetic terms. Vygotsky called the method, which offered such vast opportuni-

ties to researchers, the "experimental-genetic method". He characterised it as follows: "The thrust of this experiment is to melt each hardened and fossilised psychological form, turning it into a moving, flowing stream of individual moments, replacing one another. In short, the purpose of such analysis amounts to experimentally representing each higher form of behaviour not as an object, but as a process, to considering it in motion, to thus going not from an object to its parts, but from a process to its separate moments." The method was essentially underlied by a historical interpretation of the phenomena of the human psyche as an "application of the category of development to the study of a phenomenon". Vygotsky cited Blonsky, who wrote that "behaviour can be interpreted only as the history of behaviour", and concluded: "This is a genuinely dialectical viewpoint in psychology."

Vygotsky also tried to disclose the invalidity of the assertion by some psychologists that to study something in historical terms means to examine certain facts from the past, thus distorting the very idea of historical psychology. Vygotsky vigorously opposed them, saying that to study something in historical terms means to examine it in motion, since this is "the chief demand of the dialectical method".[1] In his article, "The Instrumental Method in Psychology", Vygotsky revealed, in the form of theses, the most important features of a method which made the historical-genetic approach to psychic phenomena concrete (he called it the "instrumental method")[2]. Considering the specific nature of an instrumental action, in which a new mediating member—a psychological instrument that becomes the structural centre functionally determining all processes constituting a behavioural act—appears between the object and the psychic impact directed at it,

[1] L. S. Vygotsky, *Development of Higher Mental Functions*, Moscow, 1960, pp. 89-132 (in Russian).

[2] Vygotsky warned that "the instrumental method" has nothing in common (except in its name) with the theory of instrumental logic formulated by John Dewey and other pragmatists (See *Development of Higher Mental Functions*, p. 229).

Vygotsky formulated the characteristic features of the instrumental method, which can be applied to studying not only the growing child but also the child who is being educated. Vygotsky saw the process of natural development and education as a single alloy and set himself the task of analysing how all natural functions of the given child are reconstructed at a particular stage of education. "The instrumental method is to demonstrate the history of a child accomplishing in the process of education what mankind has achieved in the course of the given history of labour: 'By thus acting on the external world and changing it, he at the same time changes his own nature. He develops his slumbering powers and compels them to act in obedience to his sway'."[1] "Thus," Vygotsky concluded, "the instrumental method is a way of examining behaviour in its development by means of revealing psychological instruments in behaviour and the structure of instrumental acts it creates".[2]

Vygotsky provided a considerable number of good examples of the application of the historical and experimental-genetic (instrumental) method to problems of age-group and general psychology (in particular, in studying language and thinking, that is, the problem of inner speech).

To conclude our examination of the chief methods applied by psychology at that stage, we would like to again stress that methodology was regarded as one of the central questions whose solution was indispensable for the further evolution of psychological science. The major results of the elaboration and discussion of methods, which had an impact on its subsequent re-equipment in this respect, can be summed up as follows:

Division of all psychological methods on the basis of the principle of objectivity was initiated and substantiated. Subjective methods embraced: simple self-observation (introspec-

[1] Karl Marx, *Capital,* Vol. 1, Progress Publishers, Moscow, 1983, p. 173.

[2] L. S. Vygotsky, *Development of Higher Mental Functions,* pp. 230-31.

tion), the labour method of psychotechniques, experimental self-observation (the Würzburg methodology), the method of verbal account, and verbal association, the questionnaire, biographical method, and the artistic-intuitive (artistic-illustrative) method, utilizing the psychological material contained in belles-lettres. Objective methods included: systematic immediate observation, the somatic method (used to examine man's physical condition), natural experiment, testing, laboratory experiment, the reflex, reactological and comparative-genetic methods.

The suggested classification is also not perfect in the logical differentiation within each group or in referring individual methods to a particular group (using the objective or the subjective method). However, the principle of approach to methods of psychological research as objectively authentic estimates of the testees' behaviour and mental activity is nevertheless fruitful. Objective methods, it should be noted, moved to the fore in the post-revolutionary period, while self-observation was largely regarded as an auxiliary method and many authors emphasised that it should be placed under the control of the objective method, without which the information it provides would not be valid in scientific terms.

In that period, the first attempts at making dialectics one of the principles underlying scientific psychology were launched. The dialectical method was considered on a par with other methods applied in psychology in the first edition (1925) of Kornilov's textbook of psychology. However, in subsequent editions it was characterised as a general fundamental principle, as a dialectical approach to studying human behaviour rather than just one of the methods commended for use.[1]

[1] "Such an examination of human behaviour, in which everything is dynamic, i.e. everything is fluid and moving and is penetrated through and through by incessant leap-like transitions from quantitative complications to qualitatively new formations, with man's behaviour completely determined as a whole by the socio-biological factors, we call a dialectical approach to the study of man." (K. N. Kornilov, *Text-Book of Psychology Treated from the Viewpoint of Dialectical Materialism*, Moscow, 1928, p. 16.)

The publication of the "Conspectus of Hegel's Book *The Science of Logic*" in *Lenin Miscellany IX* in 1929 was of cardinal significance in this connection. Commenting on the "elements of dialectics", Lenin remarked: "1) the *objectivity* of consideration (not examples, not divergences, but the Thing-in-itself); 2) the entire totality of the manifold *relations* of this thing to others; 3) the *development* of this thing, (phenomenon, respectively), its own movement, its own life."[1]

The prevailing tendency to regard man from the angle of his objective interrelationships with social environment and the effort to conduct an integral study of man in the process of development typical of the late 1920s and early 1930s was actually realisation of the dialectical approach to research into human behaviour. In particular, it was reflected in increased attention to the comparative-genetic principle or method, as well as to the biographical method and the method of natural experiment, which were supposedly to include elements of dialectics.

Contrary to the pre-revolutionary period, the methods typical of applied psychology (pedagogical and child psychology, psychology of labour, bibliopsychology, etc.) now took priority: natural experiment, the comparative-genetic method, tests, questionnaires, the biographical method, the labour method of psychotechniques. The bulk of work on psychological methodology dealt with methods of applied psychology rather than general psychology (about four hundred titles in total). This can be explained by the demands made on psychology by the practice of the socialist construction, the school, production, and military training. However it should be noted that the quantitative growth of investigations and methodological papers on concrete issues far exceeded their qualitative level. Thus quite often methods of dubious scientific value were introduced into scientific psychological research. It was much later that

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[1] V. I. Lenin, "Conspectus of Hegel's Book *The Science of Logic*", *Collected Works*, Vol. 38, 1981, pp. 220-21.

the major methods of psychology were finally selected and estimated from the positions of dialectical materialism.

The structure of psychology as a scientific discipline in the period under review, was determined by the demands made on it by the socialist construction and the need to elaborate the scientific foundations of psychology. It was a kind of the "social order" at that time. We have already described the demands of socialist construction in the chapter dealing with the post-October period, the chief among them being the needs of people's education and a scientific organisation of labour. The range of questions within the competence of psychology, however, was not reduced to this. Issues involved in specific branches of socialist activities, whose number expanded greatly towards the end of the 1920s and the early 1930s, also claimed its attention. Psychology of that period was characterised by its involvement in the fulfilment of concrete tasks. This can be explained by its efforts to respond to the most vital problems of the country's national economy and culture. Psychologists took an active part in the work of institutions and departments of a number of People's Commissariats, first of all, of the People's Commissariat for Education, the People's Commissariat for Public Health and the People's Commissariat for Labour. Correspondingly, they specialised in the three spheres, in addition to the development of general psychology.

The first field of the practical application of psychology was people's education, where psychological institutions worked under the direct guidance of the People's Commissariat for Education (A. V. Lunacharsky, N. K. Krupskaya, M. N. Pokrovsky, A. S. Bubnov, and others). Special attention was paid to child psychology by Bassov, Vygotsky, Leontiev, N. A. Rybnikov, and A. A. Smirnov. The main task faced by child psychology at that time was to characterise the peculiarities of children depending on their age.Psychology was evolving under exceptionally hard conditions, experiencing major difficulties as it strove to achieve a dialectico-materialist concept of mental development that could be based neither on the principles of biogenesis nor on those of sociogenesis, nor by mechani-

cally combining the two. The tasks faced by social education stimulated the evolution of pedagogical psychology as well (Blonsky, Molozhavy, I. A. Sokolyansky, P. S. Zaluzhny), the core of which consisted of psychological problems involved in training and education, and primarily those concerned with the formation of collectives and the influence of social environment on the personality (A. S. Makarenko). This set of questions was closely linked to problems of social psychology (Bekhterev, V. A. Artyomov, L. N. Voitolovsky, Luria, M. A. Reisner) engaged in the theoretical elaboration of the psychology of a collective and efforts to discover the laws governing the social determination of personality. Psychology of art and creative activity, represented by the works of Vygotsky, M. M. Bakhtin, K. S. Stanislavsky and others, also belonged to the branches of psychology active in the particular field.

The second field of the practical implementation of psychology was the organisation and rationalisation of labour and creation of better labour conditions. The leading branch of psychology in this field of application was psychotechniques (N. I. Shpilrein, L. S. Gellerstein, N. V. Levitov, A. M. Mandryka, A. A. Tolchinsky, M. Yu. Syrkin). Psychotechniques found application in a number of sectors in the national economy, and first of all in industry, transport, trade, communications, and the polytechnisation of the secondary school. Military psychotechnique or military psychophysiology (Yu. P. Frolov, A. A. Talankin, G. Khakhanyan) also evolved at a rapid pace. Aviation psychology was developing as a branch of psychology of labour (A. Nechayev, N. M. Dobrotvorsky, S. Ye. Mints). It dealt with identifying problems involved in the labour of aviators, aviation psychohygiene and psychological problems of the training of pilots. Psychology of sport (P. A. Rudik, A. Ts. Puni, Z. I. Chuchmarev) was also closely connected with psychotechniques, in particular as regards the formation of motive habits and reactions. Psychology of reading and the specific psychological features of the reader, as well as psychologically substantiating the need to establish

a network of libraries and organising cultural activities, were undertaken by bibliopsychology and the psychotechnique of cultural and educational work (D. A. Balika, P. I. Gurov, V. I. Nevsky).

The third field in which psychology was applied was health protection, medicine and the related sections of natural science. The most important branch of psychology which was implemented in this field was pathopsychology dealing with mental derangement and abnormal behaviour and consciousness in man (Bekhterev, Vygotsky, Luria, Platonov, Myasishchev). This branch of psychology was immediately linked to physiological and social psychology, in particular the origin of psychopathological phenomena. At the same time, it comprised a department of medicine (psychiatry and neuropathology). Pathopsychology was primarily engaged in the practical studies of symptoms of mental derangement in experimental-psychological laboratories at psychiatric hospitals. It was also highly instrumental in the in-depth studies of mechanisms involved in normal human behaviour. Psychotherapy was a specific branch of pathopsychology (Zalkind, Platonov), consisting of two trends—"purpose-oriented" and "hypnotic". Yet another branch was represented by psychological principles underlying pedagogical efforts with blind, deaf and mentally-handicapped children, the totality of which served as the theoretical and experimental base of defectology (Vygotsky, L. V. Zankov,I. I. Danyushevsky, Zh. I. Shif). All these branches of the science of psychology evolved under the immediate influence of physiological ideas formulated by Pavlov, particularly in the investigations of problems related to physiological psychology or psychophysiology (the study of analysers).

At the crossroad of pathopsychology and social psychology was criminal psychology which examined the psychology of criminals, verified the authenticity of witness testimonies, studied criminals' behaviour in prisons and other detention institutions, and also developed psychological expertise.

The following chapters will provide brief characteristics of the most important branches of psychology. However, before

beginning this brief survey, we must deal with problems involved in comparative and general psychology, i.e. the sectors of psychology that are not directly linked with its practical tasks.

The problem of mental development was the central problem studied by psychology throughout the modern epoch. Psychology itself could not develop as a scientific discipline if it did not set and resolve the question of the essence of mental development. There are special branches of psychology, though, for which research into problems of mental development comprises the main content: these are child psychology and comparative psychology (animal psychology).

At the turn of the 1920s, problems of animal psychology were elaborated by a number of scientific research teams in several laboratories. In Moscow, such studies were conducted at the Scientific Biology Institute (N. K. Koltsov, M. P. Sadovnikova) and at the Darwin Museum (N. N. Ladygina-Kots); in Leningrad they were performed at the Institute of the Brain (Wagner) and in Pavlov's laboratories (Yu. P. Frolov, L. A. Orbeli). They were also conducted in Tashkent (D. N. Koshkarev), and in Kharkov (V. P. Protopopov).

Professing the common aim of investigation—behaviour of animals—the scholars substantially diverged in their interpretation of the tasks and methods of psychological and physiological research, in understanding major concepts and even as to whether the title "animal psychology" was correct. The task assumed particular importance in the light of Lenin's statement, widely current in those years, that the theory of knowledge included the history of animals' mental development as one of its components.

In the 1920s, comparative psychology renounced a metaphysical interpretation of animal behaviour, as it came to the conclusion that there was no need to draw on any transcendental, mystical factors irrespective of their names. As he examined the views of Erich Wasmann, C. Lloyd Morgan, L. T. Hobhouse, Robert M. Yerkes, Wolfgang Köhler and other animal psychologists, V. M. Borovsky came to the con-

clusion that all these scholars introduced such factors as Morgan's "proreception" or Yerkes's "ideation" under the influence of their efforts by all means to find moments in animals that would be identical to the human mind in qualitative terms (or those qualitatively similar though less developed). "This effort," Borovsky wrote, "leads directly to some form of pan-psychism." In his works we come across a clearly formulated idea that comparative psychology greatly diverges from classical animal psychology, no matter how attractive it may seem and how persistently it stresses its ties with natural science and evolutionary theory.

Two approaches to scientific tasks developed in that period among Soviet comparative psychologists, one linked with Wagner, and the other, with Borovsky. The most heated debates flared up around the problem of instincts, reflexes and "rational" actions in animals.

Borovsky, who at that time led the laboratory of comparative psychology at the Moscow Institute of Psychology and was author of many valuable papers on the problem of animal reflexes which constituted a substantial contribution to popularisation of comparative psychology, regarded problems involved with the similarity and difference between man and animals from the viewpoint of behaviourism. His position is most clearly revealed in his books, *Introduction into Comparative Psychology* (1927), *The Brain and Behaviour* (1927), *Fundamentals of Comparative Reflexology* (1929), and *Psychology from the Viewpoint of a Materialist* (1929). All these works by Borovsky were criticised by P. I. Razmyslov.

While giving Borovsky his due for his substantial contribution to comparative psychology, Razmyslov convincingly demonstrated that Borovsky approached the problem of the human psyche using the same methods he applied in studying animals, though he waged a struggle against the metaphysical trends in comparative psychology. While looking only for similar features in man and animals, Borovsky wrought havoc both in general and comparative psychology. The result was that, while in traditional comparative psychology man overshadowed

animals, in Borovsky's works, "labyrinths devised for rats" pushed man into the background.

According to Borovsky, the subjective aspect of man's reaction has no value for behavioural psychology. If it were absent, "the tasks facing psychology would not have been changed" —this is Borovsky's epiphenomenalistic conclusion, quite in the spirit of Watson's behaviourism. In this point, Borovsky adhered to the mechanistic concept of the psychic typical of reflexology. His views were also close to those of the reflexologists in the overestimation of the effect or activity which he regarded as determinative in the processes of thinking and in characterising consciousness, while reducing to the minimum the role played by the brain. Borovsky maintained that consciousness was connected with the hand and speech (in the broad sense), and not with the central processes, and that it was precisely the effector activity that was conscious, not the receptor and not the central one. Therefore, instead of studying consciousness and thinking, Borovsky saw the chief purpose of psychology in studying reflexes since he regarded the emergence of habits in man as a particular case of the formation of reflexes in animals. He said that the curves of this formation were very similar in both cases and that, evidently, the laws governing the formation of habits in man and reflexes in animals did not differ. This theoretical "generalisation" prompted Borovsky to base pedagogy on the principles of behaviourism. He stated: "The first and primary tasks of pedagogy is studying the laws governing the formation of habits."

Borovsky did not make any distinction between the formation of reflexes in animals and of habits in children. Thus he advised that pedagogy borrows methods from animal psychology: "As he engages in animal psychology, the pedagogue is directly trained in applying the methods which are fundamentally the same, must be the same in studying both children and animals." Hence a number of recommendations, such as, for example: "Comparative psychology utilises as incentive factors in instruction, food, punishment, sexual stimuli, exclusion of light, cold, dampness (or the contrary)... Which of

these factors can be applied to a child and what is their relative value—this should be studied through methods of comparative psychology."

By the late 1920s and the beginning of the 1930s, it had become clear that the behaviourist concept could not provide the solution to the problem of characterising the behaviour of animals and man. As a result of criticism Borovsky separated himself from behaviourism and overcame the reflexological vulgarisation of physiology. It should be pointed out that Borovsky made a number of valuable conclusions when he clung to animal psychology in studying the problem of habits and did not try to mechanically identify man and animals. He elucidated the role of rhythm for the acceleration of training, established the principle of adaptation economy in the formation of habits, revealed the dependence of the training time on the complexity of the habit trained. His firm opposition to the interpretation of instinct as a complex form of human behaviour, in which the acquired and the inherited merged, is largely justified. Indeed, in this interpretation, there was the possibility to mix up the biological and the social and to turn instinct into a specific "asset", like the "soul". In this connection, it should be emphasised that though Borovsky sided with reflexology as he failed to see the qualitative difference between the psyche of animals and man's consciousness and tried to explain the intellect as stemming entirely from the development of habits, he was essentially right in warning against interpreting instincts in too broad a way and in pointing out that instincts play almost no role in human behaviour.

The views of Frolov were close to those of Borovsky. In 1925, he published the book, *Physiological Nature of the Instinct*, in which, as in his other works, he explained instinct as a physiological phenomenon, a complicated chain reflex comprised of separate links-reflexes, mutually tied to one another in such a way that the end of one caused the emergence of another. This interpretation of instincts as a chain reflex was essentially correct, but the question logically arose, whether it was sufficient for understanding the qualitative spe-

cific character of instinctive actions. Let us once again turn to Wagner. As was already noted, Wagner, who belonged to comparative psychology, was far from sharing either "monism from above" or "monism from below". Already in 1910-1913, he commented on some fundamental shortcomings of both trends, which resulted, in one case, in anthropomorphism and subjectivism, in the concept of the evolution of the psyche, and in the other, in recognising animals, man included, to be passive automatons, i.e. in the biologisation of human nature. In his works written in 1923-1929, Wagner intensified his evolutionary approach to problems of comparative psychology. His main goal was not so much to contrapose his own bio-psychological interpretation of instinctive and "rational" actions to their physiological, reflexological interpretation, as to include the latter into a more broad biological conception. At the same time, Wagner continued to be resolutely opposed to "monism from below", which he identified, and quite correctly so, with vulgar reflexologism.

Wagner follows the logic of determinism as he interprets instinctive actions as "hereditarily fixed reactions to the sum total of the external impacts", while not denying that all actions are underlied by reflexes. Stating that "there is no immediate link between instincts and mental abilities", he maintains that they have a common origin in reflexes. Both instinctive and "rational" actions can be traced down to reflexes —this is their nature, their genesis, Wagner asserted.

However, he objected to the mechanical reduction of instincts to reflexes. Here he touched upon the initial point of controversies typical of that time—the question whether complex phenomena can be reduced to their components. "In such an assertion . . . [that all these are phenomena of one and the same order—*A.P.*] there is nothing out of the ordinary, but the question lies elsewhere: does this way of fulfilling the task facilitate revealing the truth, or does it hamper that process." "It is clear," Wagner goes on, "that it is only . . . through differentiating between objects and analysing them that we can approach a clarification of the genuine nature of these objects

and that all other ways, ignoring their actual difference under the pretext of their seeming homogeneity, present a grave methodological error... To try to demonstrate that instincts are only reflexes is no more scientific than attempting to prove that the wing of a butter-fly, a dragon, a bird and an aeroplane are phenomena of the same order. They are really similar in that they are all designed for flying, but they are absolutely heterogeneous in essence. The same is true of reflexes and instincts: they are homogeneous in that both are inherited and are not purposefully directed. Yet to assert, on the basis of partial similarity, that these phenomena are essentially homogeneous and to think that, having studied reflexes, we can cognise instincts, i.e. establish the laws of their development and their relationships to mental abilities, the laws of their modification and formation—would be so demonstratively divergent from facts that it would hardly be reasonable to insist on stating the opposite."[1] Wagner here rises to a dialectical interpretation of the relationship between reflexes and instincts (they are both homogeneous and heterogeneous, being similar in some respects and dissimilar in others). We noted that Wagner held that "instincts" (like "rational" actions) were rooted in reflexes. Thus, he distinguished between the question of the origin of instincts and the mind (adhering to the reflex theory in this respect) and the question of reducing mental abilities to reflexes (here he opposes the mechanism of reflexologists). This complicated problem repeatedly arose in Soviet psychology, and each time the dialectical solution was the only correct one, being the only correct way of passing between the Scylla of idealism and the Charybdis of mechanicism (refusal to recognise the reflex origin of the mind and the instincts amounted to an alliance with idealism, and reduction of the psyche to reflexes signified the union with mechanicism). Wagner arrived at an essentially correct solution by spontaneously introducing dialectics into the problem

[1] V. A. Wagner, *Biopsychology and Related Sciences,* Moscow, 1923, p. 29 (in Russian).

of the origin and essence of instinctive activity (see the series of his booklets entitled *The Emergence and Development of Mental Abilities*).

In his last book, which was not published, *Comparative Psychology, the Field of Its Research and the Tasks,* Wagner summed up his investigations in animal psychology between 1880 and 1929, and again turned to the problem of the instinct, formulating the theory of fluctuation (the theory of instinct vacillation).

Wagner once again emphasised that instincts originated in reflexes but stated that his approach to the genesis of instincts differs from that of investigators who put the reflexes, instincts and mental abilities on the same plane. His own approach differed from that of Spencer, Darwin and George John Romanes, who interpreted the connection of the reflex—instinct—mind in a linear fashion. It also differed from that of Lewis and Felix Pouchet: the reflex—mind—instinct (in the latter case, the mind was reduced). According to Wagner, psychic qualities diverged, the relation being graphically demonstrated in the following way: the reflex ⟨ the instinct / the mind.

To explain the formation and change of instincts, Wagner applied the concept of the species standard. He stated that instincts were not stereotypes repeated in the same way by all representatives in a given species, but unstable abilities vacillating within fixed inherited limits (standards) peculiar to each species. Interpretation of the instinct as a species standard which developed over the long path of phylogenetic evolution and which is not a rigid stereotype, led Wagner to an outstanding conclusion concerning the role of individuality, plasticity and variability of instincts and the causes behind the emergence of new instincts. Wagner pointed out that, in addition to mutations (as a result of which new types of features arose), new instincts can also emerge through fluctuation, which consists in the adaptation to new, changing conditions.

Wagner was far from imagining that, for example, a representative of a bird species builds its nest according to its whim,

as representatives of classical animal psychology asserted. The instinct of each representative of a species is individual in the sense that it corresponds to a given vacillation, or, to put it more accurately, it is individual "within the bounds of a species standard" (being typical of the species and individual for each of its representatives). "The totality of vacillations in the instinct of all representatives of the given species forms a standard fixed through heredity, a standard with a more or less substantial amplitude of vacillation." Further, the theory of instinct vacillation provides the key to the genesis of new qualities: "Facts show that in those cases when the divergence of the vacillation from the typical goes beyond the bounds of its standard, it finds itself in a position to trigger the emergence of new qualities, if this new quality proves to be useful and offers certain advantages in the struggle for existence and therefore is supported by natural selection."

The manuscript from which we have cited these excerpts contains the whole set of Wagner's evolutionary ideas, including his views on the essence and nature of the instinct, on the relationship of the instinct and mental abilities and reflexes.[1] Here, Wagner's system of views is repeated and developed which he defended throughout his life, and especially in his last years. These ideas exerted a tangible influence upon the development of comparative psychology in the USSR.

The interest in the problems of animal psychology was explained by the wish to study the "mental activity of animals" as one of the most important gnoseological conditions for research into the psychology of man. Hence a special interest in the works that dealt with studying the intellect of anthropoid apes.

Beginning with the mid-1920s, the works of Wolfgang Köhler became popular in the USSR. They dealt with the intellect in anthropoids from the angle of the Gestalt conception (the presence of "visual structures" and "rational abilities" in chimpanzees). Köhler's theory was characterised by anthropo-

[1] The concept of social psychology given in the last sections of Wagner's monograph is of an idealist nature.

morphism and was criticised as such by Pavlov and Wagner. Pavlov's associates (E. G. Vatsuro, A. O. Dolin, P. K. Denisov, N. A. Podkopayev, G. V. Skipin, D. S. Fursikov) and Wagner's disciples (N. Yu. Voitonis, N. N. Ladygina-Kots, G. Z. Roginsky, N. A. Tikh) proved the invalidity of the Gestalt conception of the intellect in antropoid apes experimentally, which was described in their scientific papers.

Pavlov himself criticised Köhler twice—on May 16 and September 12, 1934. Discussing Köhler's book, *Intelligenz Prüfungen an Anthropoiden,* he expressed his objection to the view of Köhler who saw proof of the apes' intelligence in that they "sat" quiet up to the point of making a decision. Pavlov saw the key to their intelligence in those actions and those associations which Köhler ignored. "Köhler is a victim to animism," was Pavlov's conclusion.

Wagner also criticised Köhler's theory of the "rationality" of the apes' behaviour. As he analysed the experiments staged by Haggerty, Robert Yerkes, Edward Thorndike, N. N. Ladygina-Kots and other psychologists, he came to the conclusion that Köhler's views were wrong. Anthropoids' actions were not purposeful, and apes cannot use stick as genuine tools. In one experiment, a chimpanzee actually succeeded in fixing one stick into another. However, the actual meaning of this experiment was undoubtedly hidden behind thousands of senseless movements made by the ape, which were not described and thus not made public—this was Wagner's conclusion. He quoted N. N. Ladygina-Kots to the effect that "a chimpanzee must spend much time and energy, make many unsuccessful attempts, and try out a host of erroneous decisions before it can finally sum them up correctly." He added: "I wouldn't say, 'sum them up', but rather 'seem to sum them up' "—a distinction which is of fundamental significance.

The works of Pavlov, Wagner, Voitonis, Ladygina-Kots, L. A. Orbeli and other psychologists, taken together, composed the basis of contemporary comparative psychology, a branch of Soviet psychology which emerged in the struggle against anthropomorphism and was characterised by the effort to rely

only on scientifically-proven facts and to provide a materialist substantiation for animal psychology.

What can be said of the development of general psychology during the 1920s and 1930s? This question should be answered before describing the evolution of applied branches of psychology.

The content of general psychology had never been clearly delineated in the history of science, and its borders often underwent changes. During the 1920s, general psychology was primarily reduced to characterising the chief behavioural mechanisms of a normal educated adult. In the 1930s, when behaviourism came under criticism, the aims of general psychology were formulated as follows: "General psychology studies the more general regularities of mental activity in normal adults." It can easily be seen that the change only concerned a general interpretation of the subject-matter of this branch of psychology. However, both in the former and latter periods the content of general psychology was described as the study of the "general laws of development" and "general mechanisms" brought to light as a result of psychological research. These "general laws of development" and "mechanisms" could only be revealed by abstracting from concrete investigations, performed in special branches of psychological research activity. This was particularly true of the 1930s, when psychology steadily approached closer to labour activities, education, ideological work and other practical activities. In the final account, the data of general psychology were largely obtained in age-group psychology, psychology of labour, pathological psychology, and other special branches of this science. For example, problems involved in thinking and speech were formed, to a considerable degree, in the sphere of pedagogical and age-group psychology, those reflecting man's interests—in pedagogical and bibliopsychology, those concerned with habits and skills—in psychology of labour, etc. This is quite understandable, since the object of study in special branches of psychology were always mental processes, psychological peculiarities of man or their sum-total under specific conditions of their

formation. In this connection, general psychology is predominantly a stock of the most important knowledge of the human mentality, often considered irrespective of its initial source. It is the totality of descriptions pertaining to the most significant scientific concepts accepted at the given level of the evolution of psychological science. As a result, general psychology cannot be recognised as equal to other branches of psychology, though it is closely connected to all of them.

That is why we shall not attempt to characterise general psychology as a special branch of psychological science, but only provide a short description of its major concepts: sensations and perceptions, attention, thinking and speech, sentiments and emotions, and volitional processes. We shall try to show how the interpretation of these concepts changed depending on the restructuring of the methodology of psychology in the early 1930s.

Sensations and Perceptions. The specific nature of the psychology and psychophysiology of sensations was somehow blurred in reflexological and reactological methods and reduced to the link between irritants and reactions. This was due to the influence of behaviourism with its generally anti-psychological attitude which ignored the problem of sensations as allegedly subjectivist in its very essence. No special section is even dedicated to sensations and perceptions in the Kornilov's *Text-Book of Psychology Revealed from the Angle of Dialectical Materialism*. The chapter entitled "The Nervous System: the Receptor Mechanism", described at length the physiological base of sensations and traditional experimental methodology applied at the Moscow Institute of Psychology. However, not a single attempt was made to explain what is sensations and how they are related to the physiological apparatus. This led Kornilov to many serious mistakes. For example, he examined Müller's theory of specific energy in the sense organs without in the least criticising its Kantian content.

At the same time, at many laboratories concrete investigations in the field of psychology of sensations were conducted. In spite of the fact that they were under a certain influence

of reflexological and reactological conceptions, in the final account they found effective ways for solving the tasks they set themselves in these experiments. It is significant that problems involved in the psychology of sensations and perceptions (like other psychological problems), were constantly enriched by the fruitful impact of corresponding practical spheres, such as military art, hygiene of labour, lighting technology, architecture, and practical medicine. Among a great number of experimental works, S. V. Kravkov's investigations into visual sensations should be mentioned as the most important. He began them in 1920 and finished his classical work, *The Eye and Its Work,* in 1932. Also of vast significance were works by S. N. Belayeva-Exemplyarskaya dealing with musical sensations, as well as by B. N. Severny, A. A. Smirnov, B. M. Teplov and P. A. Shevarev in the field of visual sensations and perceptions. In the late half of the 1920s and the early 1930s, D. N. Uznadze started intensive research into the theory of the set in connection with an experimental study of illusions in the perception of various modalities. We shall not list the vast number of investigations into the psychology of sensations performed in that period or try to estimate their nature and results. However, it should be noted that the experimental foundations of the materialist theory of sensations and perceptions were laid down at that time and the main cadres of psychologists formed, capable of finding creative solutions to the most important tasks. Scientific maturity characteristic of the Soviet psychologists, who specialised in sensations and perceptions, came into bold relief during the Great Patriotic War against fascist Germany (1941-1945), when they rendered tangible assistance to the front by improving camouflage, raising light and acoustic sensitivity, accelerating adaptation and night vision, etc.

However, these concrete experimental investigations could have remained just so much material for scientific theory and not constitute its foundation, were it not for the ideological platform adopted by Soviet psychologists in the early 1930s—the Leninist theory of reflection. Sensations began to be treat-

ed as images of moving matter, i.e. as images of the external world.

Rubinstein in his *Fundamentals of Psychology* directly referred to Lenin's theory of reflection before he started interpreting sensations. Actually, Rubinstein counterposed the interpretation of sensations as an image, as "an immediate link of knowledge with the external world" to Johannes Müller's principle of the "specific energy of the sense organs".

The approach to "structuralness", or "integrity" was taken from Gestalt psychology which played an important role in developing psychology of perceptions. Now it was revised in the light of the idea about the active nature of consciousness (in every perception, reality is not only passively reflected, but also actively processed under the influence of the past social experience). Basing himself on the works of Marx, Rubinstein advanced an idea, first in a short outline in the draft of his article, "Problems of Psychology in the Works of Karl Marx", and then at length and more definitely in the *Fundamentals of Psychology* (1935), that perception was a historical phenomenon: "The inclusion of perception into the sensible links of consciousness at the same time signifies its inclusion into the process of the historical development of consciousness. Human perception is historical. Man's sensual perception is not to be reduced to a sensory act underlied only by the physiological nature of receptors. It is only a relatively immediate act of the world's cognition by a historical individual. Immediate perception of reality at a given stage of development is based on its spontaneous mediation by the entire objective practice of the past, in the process of which man's sensuality is restructured."[1] The Gestalt conception was thoroughly criticised and reassessed by the author. He also stressed that Gestalt psychology's idealism was obvious in the theory of integral structures in the human psyche, treated by this, allegedly "neutral" in philosophical terms, psychological system as the primary source from which the external world origi-

[1] S. L. Rubinstein, *Fundamentals of Psychology,* Moscow,1935, p. 184.

nated. Thus a radical turnabout was made in interpreting sensory and perceptual processes resulting from the methodological shift to the Leninist theory of reflection. Later, we shall deal with similar changes that occurred in the theoretical treatment of many psychological processes in the mid-1930s.

Attention. Attention was interpreted as an organism's adaptation to the perception of irritants in the best possible way. It was usually referred to as an orientation reflex (according to Pavlov), or a concentration reflex (according to Bekhterev), or a set in reactions (according to Kornilov). Attention was described in physiological terms in conformity with the dominant theory formulated by A. A. Ukhtomsky, which states that some of the simultaneously functioning nervous centres reveal maximum excitation, so that all the other functioning centres are either suppressed, or come to play an auxiliary role, facilitating the functioning of the group of nervous centres predominant at the given moment. Blonsky and Dobrynin tried to prove through experiment that social experience is the main factor in establishing the "set"[1] of a human individual. Dobrynin proved in his book, *Vacillation of Attention,* that involuntary attention overcomes a certain instability and biological rhythm in the functioning of the excitation centres and may last for substantial periods of time, depending on the social demands and previous experience. Attention is drawn primarily to those irritants which concern the individual's vital interests. Dependence of attention on the system of man's vital needs and insufficiency of a purely physiological characteristic of attention was also noted by Blonsky: "The roots of attention lie in vital interests: it is precisely from the interests, needs and dissatisfactions that attention arises... Attention is concentration, a set, the dominating excitation of a given organ ... all these are irrefutable facts ... yet not the explanation.[2]

[1] "The set in reactions" in reactology should not be confused up with the notion of the "set" in Uznadze's school.

[2] P. P. Blonsky, *Psychological Essays,* Moscow, 1927, p. 132 (in Russian).

After the "turnabout on the psychological front" (noted earlier), attention soon began to be interpreted very much as it is today: it was treated as an organised selective character of the processes taking place in consciousness. Soviet psychologists had to firmly reject all efforts to reduce attention to a reflex set typical of reflexology and behaviourism. In doing that, they did not reject the reflex theory as they stated that it would be unscientific to consider phenomena involved in attention outside the reflex sets as reference-points in the process of development. However, they could not agree that these sets could explain the entire process of attention, as behavioural theory asserted. In the mid-1930s, many psychologists supported the view that they could not (N. F. Dobrynin, S. L. Rubinstein). The theory of attention proposed by Gestalt psychology, which reduced its laws to the "structural character of the sensory field", had by that time been fully renounced. As Rubinstein noted in his *Fundamentals of Psychology* (1935), had that theory been true, we would have been "the slaves of the field of vision on a par with Wolfgang Köhler's apes". As Rubinstein put it, "All psychological processes inherent in man, beginning with perception, at a certain stage of development turn, to a greater or less degree, into consciously directed operations. To deny that and reduce the entire problem of attention to the structural character of the sensual field is in fact to deny the existence of a subject who is opposed to objects and actively influences them."

Thus a tendency emerged to interpret attention as a manifestation of the individual's activity (Dobrynin); mechanicism and functionalism were discorded, and it became possible to regard the problem as an aspect of the fundamental problem of the correlation between the individual and the world.

Thinking and Speech. Thinking was studied in three directions: 1) elucidation of its internal structure and first of all its relation to speech (speech reactions) and to the image system of notions (the latter was explained by the need to consider the works of the Würzburg school and overcome its

influence); 2) bringing to light the laws and dynamics of its development in children (Vygotsky and his associates); 3) organisation and hygiene of brainwork (largely involved in psychotechnique tasks). Before it arrived at the correct understanding of thinking (as a generalised and mediated reflection of reality), Soviet psychology had to break out of the quagmire of the existing concepts of thinking (the theories of William Stern, Jean Piaget, the Würzburg school, Gestalt psychology, etc.).

The first experimental studies to elucidate the problem of thinking, launched in the latter half of the 1920s, were linked to the general theory of behavioural psychology, though they revealed dissatisfaction with the simplified behaviourist schema. S. V. Kravkov saw thinking as the reaction to a new situation and noted that habits and memory were not enough to find a way out of that situation. He, at the same time, emphasised the qualitative specifics of the processes of thinking. Blonsky treated thinking as a form of an organism's interaction with the environment (*Psychological Essays*, 1927), and considered ideas the specific reactions of the cerebral cortex to stimuli which tipped the balance of its vital activity. Vygotsky in his early works (*Pedagogical Psychology*, 1926), also stressed that thinking was determined by objective reality. He followed Sechenov in stating that an idea was two-thirds a mental reflex. He performed the first experimental studies of one of the central problems of thinking—the process of notion formation (the study was carried out jointly with L. S. Sakharov). These studies brought to light the role of the word as a means of generalisation conditioning the formation of a notion; thus he overcame the mechanistic schema suggested by Francis Galton.

The subsequent fate of the problem of thinking in Soviet psychology hinged on how thoroughly and profoundly the dominating theories of mental activity current at that time were criticised, especially those of Jean Piaget and William Stern, which exerted a powerful influence on the view of that problem at the turn of the 1930s. Works by Vygotsky containing

serious criticism of psychological concepts played an important role. Criticism was meted out on the theoretical plane, and the concepts of both Piaget and Stern were refuted from the angle of their scientific merit (the concept of the "egocentrism" of child speech and thinking and the issue of intellectual "discoveries" made by children, respectively).

His theoretical-critical essays were a prelude to Vygotsky's profound study of the problem of speech and thinking as a whole, based on the idea of their dialectical unity (*Thinking and Speech*, 1934). There are a number of statements in this work, which subsequently made up the pool of the fundamental propositions of psychology on the problem of thinking. Vygotsky proved that the meaning of a word is a specific form of the reflection of reality. He interpreted the word as a living unity of sound and meaning, containing, as in a "living cell", all the main properties inherent in thinking-in-words represented in the simplest form. The application of the idea of development (which was central in Vygotsky's psychological views) to the analysis of the word's meaning as a unity of speech and thinking proved to be very fruitful. In addition to formulating the general theoretical concept of thinking and speech, Vygotsky conducted concrete experimental studies to elucidate this problem. His view, his research resulted in the following discoveries: 1) it was established experimentally that the word's meanings develop in childhood, and the main stages in that development were described; 2) the specific way of developing scientific notions in children was revealed in comparison with spontaneous notions, and the chief laws of that development were elucidated; 3) the psychological nature of written speech was shown as an independent function of speech in its relationship with thinking, and 4) the psychological nature of inner speech in its relationship with thinking was revealed through experiment.

These new facts established by Vygotsky and his associates —A. N. Leontiev, A. R. Luria, L. S. Sakharov, R. Ye. Levina, et al.—became reference-points for numerous investigations later conducted by Soviet psychologists.

Of vast significance for elaborating the problem of thinking were the works of Blonsky (*Memory and Thinking*, 1935, and *Development of Thinking in a School Pupil*, 1935).

In the mid-1930s, textbooks and manuals on psychology already considered thinking in the light of the theory of reflection: "Our consciousness does not only reflect in perceptions and notions the individual objects of the surrounding reality, it also reflects the links and relations existing between phenomena in this surrounding reality, since, in Lenin's words, 'to really know an object, it is necessary to embrace all its sides, all its links and mediations'. This can only be done by means of thinking, which we interpret as a mental function consisting in revealing the ties and relations that exist between phenomena in the real world."[1] "To reflect an object adequately, it is necessary to reveal its links and those mediations in which it is objectively included and which manifest themselves in its development. It is only a mediated definition of an object, resulting from disclosure of its internal links and relations, that can be regarded as an objective definition. This mediated establishment of relations and dependencies, the disclosure of internal links and regularities is thinking."[2]

Emotions. Emotions ("mimical-somatic" reflexes in Bekhterev's terminology, and "instinctive-emotional reactions" in Kornilov's), were regarded in the latter half of the 1920s primarily as inherited reactions connected with instincts, which arise in response to an obstacle in the path of *the manifestation of* an instinct as signals indicating the nature (positive or negative) of that obstacle. As Kornilov said, "Emotions follow instincts as the shadow follows man." Emotions were regarded as reflexes of the vegetative nervous system accompanied by the functioning of endocrine glands. "Instinctive reactions reflecting either the rise or the decline in the vital functions as an indicator of the degree to which vital needs are either satisfied or not satisfied, are called instinctive-emo-

[1] K. N. Kornilov, *Psychology*, Moscow, 1935, p. 114 (in Russian).
[2] S. I. Rubinstein, *Fundamentals of Psychology*, p. 305.

tional reactions, or sometimes simply emotional reactions, or emotions" (Kornilov). There were considerable shifts in the general interpretation of the problem of emotions in the period under review in comparison with the contemplative schema of empirical psychology, seen in the close attention paid to the physiological sources of emotions (in the light of the ideas proposed by Pavlov, Ukhtomsky and Walter Cannon). The works of Bekhterev, Head and Berd provided material for establishing the vast significance of the thalamus in the physiology of emotional reactions. Many scholars believed that emotions directly depended on whether vital needs were satisfied, and this made it possible to regard emotions as socially determined. Widely current, even if debated, was the theory of William James and Carl Lange, which was criticised by Kornilov as dualistic and unsound. Valuable methodology for studying emotional processes was elaborated and verified at that time, in particular, Luria's conjugate motor method. He conducted valuable experimental and theoretical studies, which later comprised the basis for a fundamental monograph published in English. But as a whole, psychology could not yet overcome the interpretation of emotions as largely instinctive processes, thus plunging the social essence of emotions into the biological chaos of hereditary predispositions and unconscious inclinations. Reminiscences of the views on emotions of Freud, Adler and Jung also persisted in the research into emotional processes.

Following the debates of 1931-1932, as psychology began to be shifted on to the base of the theory of reflection, emotional processes began to be seen in a different light. The changes, actually, served to theoretically formulate a new concept of emotions. Interesting in this respect are the first few lines of the chapter "Emotions" in Rubinstein's book, *Fundamentals of Psychology* (1935): "We not only passively reflect the world and cold-bloodedly influence it... Events of our life become the source of emotions, entirely overwhelming us because they make our feelings vibrate. Stifle our emotions, and the world will become dull, and life colourless and

devoid of all interest." Noting that the time had gone when psychology of emotions was restricted to classifications and descriptions devoid of any theoretical ideas, Rubinstein stated that psychology of emotions should be restructured along the same lines as contemporary psychology of perception—the field which was the first to be reconstructed on the basis of the theory of reflection.

In the process, a number of valuable propositions were formulated by Soviet psychologists. Thus, Rubinstein stressed that any human emotion, rather than just expressing a subject's state, reflects his attitude towards an object, i.e. the world. "Human emotions represent a specific form of objective consciousness, reflecting man's attitude towards the objective world." He supported those psychologists who diverged from the interpretation of emotions, current in psychology in the 1920s, as an organism's visceral reactions and stated that man's emotions were mediated and underlied by real social relations, in which man is included, and by the mores and customs of the particular social medium and its ideology. "Each new objective area emerging in social practice and reflected in human consciousness gives rise to new emotions, and in these new emotions, man's new attitude to the world is established."[1] Since man's emotions are socially mediated and included into the structure of his consciousness, they are also included into the process of the historical development of human consciousness. "Man's emotions are those of a historical man"—this Marxist thesis became a principle of Soviet psychology. Moreover the process of the formation of emotions in man is inseparably linked in psychological research with the entire process of shaping the human personality.

Volitional activity. Reactology (and partly reflexology) tended to ignore this aspect of the human psyche as an object of psychological research. Kornilov's *Text-Book of Psychology* does not even mention it, while reactology does not provide any analogues to the term of "will power". Kornilov

[1] S. L. Rubinstein, *Fundamentals of Psychology*, pp. 408-409.

only speaks of the effector mechanism as "the concluding stage of the reflex act". This is not due to the author's short memory (before the Revolution he specialised in studying will power), but is testimony to the mechanicism of the reactological concept, which did not provide any place for the principle of a conscious regulation of response activity. Will power as a complicated mental process could not be restricted by the narrow bounds of the reactological or reflexological schema and was therefore described in psychological literature[1] in terms of old empirical psychology or formulated vaguely as a function of the coordination and internal regulation of activity. At the same time, contraposing will power to the intellect and emotion accepted in old empirical psychology, was incompatible with recognising will power as a socially-determined function of the coordination of the individual's entire activity—the point of view increasingly gaining new positions in Soviet psychology.

The question of the influence of the word (and, more broadly, suggestion in general) on human activity occupied a special place in the problem of will power. It was raised in connection with the ideas formulated by Pavlov and Bekhterev in their works, according to which the word was interpreted as a "complex irritant", a "substitution for a fact", an "order" or "instruction". These ideas are underlying a vast number of scientific studies, theoretical articles and popular-scientific essays on psychotherapy and hypnosis. Outstanding among these, besides the works of Bekhterev, was a fundamental monograph written by Bekhterev's disciple K. I. Platonov, *The Word as a Physiological and Curative Factor,* which summed up experimental research performed by the author and his associates in 1925 at the Ukrainian Psychoneurological Institute.

It was impossible to create a convincing theory of will power within the framework of the behavioural concept of psy-

[1] For the main part, in the extremely voluminous popular-scientific literature that dealt mostly with developing will power and strong character.

chology because of its mechanistic approach to man and his activity. A teleological interpretation of the volitional act typical of subjective psychology and its anti-determinism led to a protest on the part of those who sided with behavioural psychology. However, instead of suggesting a positive solution to the question of the essence of will power, a negative one was formulated: will power is an illusion, a fetish of subjectivism. By the end of the 1920s, the mechanistic concept of will power came into conflict with the ever-increasing effort to rely upon the activity of the mass of the people engaged in building socialism in the Soviet Union. It also came into conflict with the principle of introducing planning in the economy (in May 1929, the Fifth Congress of Soviets approved the First Five-Year Plan) and the growth of consciousness. The concept proposed by M. Ya. Bassov was an attempt to overcome the mechanistic variant of dealing with the problem of will-power.

Recognising an organism's activity in its relationships with the environment and in the diverse forms and processes of behaviour as the subject-matter of psychology, Bassov formulated a thesis which gained popularity in that period: to study man as an active figure in the environment. The process of activity viewed as an entirety realised either in some external action or internal reaction, was regarded as a concrete object of study. Bassov held that only the form of activity, and not its essence, differed. It was a conclusion which undoubtedly constituted a progressive step toward the theory of unity between consciousness and activity that took firm root in the mid-1930s.

Bassov tried to find a place for will power in the structure of human activity; contrary to behaviourists and reflexologists, he regarded will power as a major psychological concept, embracing the entire field of conscious, purposeful action. For Bassov, it involved first of all the organisation of the process of activity, a particular organisational form with a very complicated regulatory mechanism. He made an attempt to use Pavlov's theory of the nervous excitation processes, of their

irradiation and concentration to explain phenomena of will power in physiological terms. Pavlov's theory of temporal links and chain conditioned reflexes undoubtedly had an impact on Bassov's concepts of the forms of volitional process (a simple temporal chain of the individual acts of behaviour, an association-determined process and a perception-determined process).

The "turnabout on the psychological front" introduced radical changes into the general interpretation of will power; it put an end both to its teleological explanation and to the recognition of an illusory nature of volitional acts by behaviourists. Marxist theory armed Soviet psychology with a set of significant propositions, which enabled it to conduct studies related to the problems of will power. The dialectical doctrine on freedom as a recognised necessity, adopted by psychology, made it possible to solve one of the key issues involved in volitional activity—that of the determined nature of will power. A free volitional act was regarded as an action conscious of its necessity as a result of the person's realisation of the law-governed connection which led him to the given action and was reflected in it.

Will power came to be considered a product of history and the recognition of its specific nature did not signify the negation of laws of development determining it, but the recognition of its qualitative originality. Thus, will power, on the one hand, was not excluded from a genetic relationship with more elementary kinds of reflex activity, while on the other, its qualitative originality as compared to all of them was revealed. These qualitative specific features were disclosed through the Marxist interpretation of the nature of man's labour activity and on its basis, of the essence of a volitional act: "Volitional action is an act in which a conscious goal as a law determines the way and character of action."[1] Contrary to subjectivist psychology, which saw the originality of volitional action in the specific nature of the corresponding emotion itself

[1] S. L. Rubinstein, *Fundamentals of Psychology*, p. 437.

("Let it be!" in James), Soviet psychologists advanced the idea that on the psychological plane the volitional act is determined by a specific relationship established in it between the acting subject and the surrounding world.

The attitude towards an individual performing a volitional act undergoes a change parallel to that of the latter's interpretation. Consciousness—the central concept in Soviet psychology—is organically included into the theory of will power.[1] "An ideal symbolical notion of an action forestalls the real action", "an action is forewarned by the awareness of its purpose and mental consideration of its consequences", "a conscious process is wedged in between an impulse and an action"—all these formulations testify to the fact that psychology of will power no longer permitted any return to the behavioural concept of an immediate simple link that exists between an impulse and an action, or to the fatalisation of a "force field" typical of Gestalt psychology, which allegedly governs human behaviour. "Volitional acts are no less determined and law-governed than unconscious—impulsive, instinctive, reflex motions—but the nature of their regularity and determination is different. From immediate it becomes mediated. A volitional act is mediated by the individual's consciousness."[2]

Thus we deem it possible to conclude that by the mid-1930s, major psychological concepts had as a whole been given an adequate theoretical interpretation. The examination of special (applied) branches of psychological science brings one to the same conclusion.

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[1] See A. V. Petrovsky, "To the History of the Problem of the Individual's Activity in Soviet Psychology", *Questions Involved in the Activisation of Thinking and Creative Activity of Pupils*, Moscow, 1964 (in Russian).

[2] S. L. Rubinstein, *Fundamentals of Psychology*, p. 439.

Chapter Eight

EMERGENCE OF CHILD AND PEDAGOGICAL PSYCHOLOGY

Pedagogical and child psychology belong to the most thoroughly developed branches of Soviet psychological science. Since they dealt with urgent needs of education in Soviet Russia, these branches attracted close attention during practically the entire historical period under consideration. For the same reason, however, the errors and shortcomings characteristic of solutions suggested to a number of questions by child and pedagogical psychology, met with an exceptionally strong response in social life.

The history of pedagogical and child psychology in the latter half of the 1920s and the first half of the 1930s, is linked to the history of pedology. This explains why it is absolutely impossible to analyse the most acute problems involved in the development of child and pedagogical psychology in that period without indicating the place occupied by psychology on the "ideological front". To fully comprehend the features of that development, one should clearly conceive the contours of the discipline which claimed the role of a synthetic science uniting all knowledge concerning the child, including the psychological.

Pedology, or the science concerning children, emerged in the West in the late 19th century. The founding fathers were Stanley Hall, Ernst Meumann, Wilhelm Preyer, James Mark Baldwin. In the early 20th century it spread to Russia, where it assumed the form of a broad pedological movement which became especially active on the eve of the October Revolution. It is noteworthy that the *Bulletin of Psychology, Criminal An-*

thropology and Hypnotism, edited by Bekhterev, in 1912 changed its title to the *Bulletin of Psychology, Criminal Anthropology and Pedology*. The pedological movement embraced the work of psychologists A. P. Nechayev, G. I. Rossolimo, I. A. Sikorsky and K. I. Povarnin; and of pedagogues, physiologists and hygienists P. F. Lesgaft and F. F. Erisman. Pedological questions were raised at congresses on pedagogical psychology and experimental pedagogics. General interest displayed in pedology was also reflected in the establishment of the Pedological Courses and a Pedological Institute in Petersburg.

Following the October Revolution, pedological activity assumed a new dimension: a wide network of pedological institutions was set up at all levels—central, regional and local, whose work was mostly supervised by three People's Commissariats—the People's Commissariat for Education, the People's Commissariat for Health and the People's Commissariat for Railways. By the time of the First Pedological Congress in Moscow (it took place from December 27, 1927 to January 4, 1928), scientific research into problems involving children had been underway in the following pedological establishments: the Institute of Scientific Pedagogics of the Second Moscow State University (I. A. Aryamov, P. P. Blonsky, L. S. Vygotsky, S. S. Molozhavy), the Scientific-Pedagogical Institute for Elaborating Methodology of School Work (N. A. Rybnikov), the Academy of Communist Education (A. B. Zalkind), the children's department of the nervous disorders clinic at the First Moscow State University (G. I. Rossolimo), the Institute of Scientific Pedagogics in Leningrad (M. Ya. Bassov, L. G. Orshansky), the pedological consulting centres at the Herzen Pedagogical Institute (A. P. Boltunov), and many others. In 1928, a periodical titled *Pedology* began publication (editor-in-chief A. B. Zalkind). It soon became the organ of the central interdepartmental pedological commission, with Zalkind at the head. A large number of pedological laboratories and consulting centres mushroomed all over the country—in Saratov, Orel, Voronezh, Tashkent.

It would be no exaggeration to say that in that period all studies of child psychology were conducted under the aegis of pedology and that all leading Soviet psychologists, physiologists, physicians and pedagogues engaged in such studies were included in the bracket of the pedological cadres. "Today everyone who is engaged in studying children is considered a pedologist, and all studies involving children are called pedology," Blonsky wrote in 1930. "Yet it would hardly be proper to extend the meaning of this word to such dimensions: as a result of this, everybody is a loser, and nobody the winner. On the one hand, pedology appropriates what by right belongs to, and has been gained by, other sciences—physiology, psychology, sociology. On the other hand, precisely for that reason pedology ceases its existence as an independent discipline, because it finds itself deprived of its own pesific subject-matter."[1]

Significantly, for the entire period of its existence, pedology had not managed to delineate the subject-matter of its research. The formulation—pedology is the science concerning children—could not claim to be a scientific definition, since it was just loan translation. This was realised fairly well by pedologists themselves (Blonsky, Bassov) who exerted every effort to find specific problems for their discipline that would not be reducible to those of certain related fields of knowledge. Blonsky wrote: "There is no denying the truth: even now the courses in pedology are often just a hodgepodge of diverse fields of knowledge, a mere medley of information from various disciplines concerning children. But can such a hodgepodge be regarded as a special independent discipline? Of course, not."

Blonsky himself defined the subject-matter of pedology as follows: "Pedology is engaged in studying the symptom-complexes (symptom-groups) of different epochs, phases and stages of the child age in their temporal succession and their de-

[1] P. P. Blonsky, *Age-Group Psychology*, Moscow-Leningrad, 1930, p. 7 (in Russian).

pendence on various conditions." However, this definition was not sufficient for bringing out the specific nature of the object of pedological studies. Bassov remarked that the sciences which separately studied the child's growth, constitution and behaviour, i.e. child anatomy, physiology and psychology, invariably also study the developmental process involved in these aspects of the nature of the child. They establish the "epochs, phases and stages" of that process, tracing not only certain individual lines of development of these phenomena, but also their mutual ties at various levels of development, their mutual relations and the entire complex configuration they compose in their aggregate at a definite stage of the child's development. "In other words, even in a psychological study of a child, we are faced with the task of bringing out complex 'age symptom-complexes', in the same way as in an anatomo-physiological study. But in each particular case, it would be either morphological, or physiological, or psychological [and not pedological—*A.P.*] symptom-complexes."[1] Thus, Bassov demonstrated clearly enough that pedology (at least, as Blonsky understood it) had no subject-matter of its own and was not as yet a special discipline with a specific object of study (Bassov's own interpretation of the subject-matter of pedology will be dealt with somewhat later).

Bassov made an attempt to resolve the issue of the subject-matter of the special science of the child in a most original way. He renounced the assertion that individual discipline, which pedology relied, did not provide specific age characteristics and interpreted pedology as a scientific synthesis of essential results obtained by individual disciplines, which investigated developing man each from its own specific angle. Thus, Bassov's interpretation of the subject-matter of pedology did not claim to be independent or specific in respect to its tasks. He thought that no changes occurred in the natural evolution of the related scientific disciplines of long standing in con-

[1] M. Ya. Bassov, *General Fundamentals of Pedology*, Moscow-Leningrad, 1931, p. 18 (in Russian).

nection with the emergence of pedology—neither in child anatomy, physiology nor psychology. The development of the latter proceeds at an increasing rate up to the present day, while pedology's appearance on the scene has never been a factor in that development. According to Bassov, pedology is not a new discipline on a par with these sciences, but stands "above" them.

Bassov was right in stating that pedology was not a new science of children occupying a legitimate place on the same footing with other disciplines dealing with children (age-group anatomy, physiology and psychology); he was also right in urging the synthesisation of knowledge of children and for the study of the child in complex terms. Yet the crux of the matter consists in the fact that pedology, which appeared on the scene in the Soviet Union in the 1920s, did not, to any degree, meet the demands of a complex discipline. To synthesise the knowledge of children, it was necessary to effect a preliminary methodological analysis of relevant psychological, physiological and anatomical data. This was actually begun in the mid-1930s. However, in the 1920s, pedology could not actuate a scientific synthesis of diverse information concerning children that had been provided by other disciplines. Pedologists-theoreticians actually proved to be psychologists (Vygotsky, Bassov), defectologists or psychiatrists (A. S. Griboyedov), pediatricians (Ye. A. Arkin), physiologists, hygienists, sociologists , etc. etc.; thus, the "synthesis of science" they firmly proclaimed at the start, as a rule ended with the last words of prefaces to their books.

For example, if we take a look at the content of the capital work authored by Bassov, *General Fundamentals of Pedology,* we can see at once that the "foundations of pedology" constitute but a concoction of biological, sociological, physiological and anatomical information, as well as vast data from the field of psychology. Moreover, the chapters of the psychological sections in the book are only vaguely connected with the preceding sections. In any case, there are absolutely no grounds to speak of any synthesis. The chapters dealing

with child psychology in Bassov's book as in many other works which composed the golden fund of pedological literature, were actually psychological monographs—each with its own merits and shortcomings—only technically bound together to other monographs, on child anatomy and physiology.

In stating that pedology embraced vast material from the domain of psychology, one should note that pedological leaders (A. Zalkind, R. Vilenkina) occupied a dual position with respect to psychology as a scientific discipline. Pedology certainly absorbed psychological information, since without it it would be deprived of any concrete content. However, its leaders often demonstrated anti-psychological attitudes, one of whose sources was the anthropologism and biologism of Stanley Hall, a founding father of pedology. As it eliminated qualitative peculiairities of consciousness in a growing person and diluted them in a general biological characterisation, pedology, which claimed to be scientifically (biologically) objective, always treated psychology with distrust, regarding it as a science probing the subjective and ignoring the Marxist-Leninist stage in the development of psychology. Vulgar sociologism was yet another source of anti-psychologism; its principle was to substitute sociology for psychology, "sociologics" (Zalkind) for pedagogics, and the investigation of the environment for that of the child's personality.

Under these circumstances, psychologists (Kornilov, Vygotsky, Smirnov and Rybnikov) engaged in research into child problems and thus included in the sphere of administrative and organisational competence of the "pedological leadership", were attacked for ignoring pedological approaches to the child and sticking to psychological positions. They were contemptuously branded as "empiricists", accused of "smuggling in Chelpanov's ideas", of "hanging on to the Marxist science on children", or, vice versa, of "manifesting a secret hostility towards it".

Many methodological aspects of pedology, its anti-psychologism, and infatuation with mass testing called for a critical attitude, in particular, on the part of psychologists. Such

critisism, already in 1931-32, was expressed in the branches of psychological science, which dealt with age-group peculiarities of children. It was subsequently confirmed in the resolution of the CPSU Central Committee of July 4, 1936, "On Pedological Distortions in the System of People's Commissariats of Education".

Following the resolution, criticism of pedological errors assumed new propositions but proceeded in a most complicated situation, because mass reprisals were launched against innocent people, both members and non-members of the Communist Party. The situation was conducive to such negative phenomena as an arbitrary attitude and abuse of power, suspicion and distrust. In 1937, many leading figures of the People's Commissariat for Education were arrested on slanderous accusations, among them A. S. Bubnov, the People's Commissar for Education and a veteran Party member. Under these circumstances, the serious mistakes actually committed by the former Commissariat's leaders, among them their bias in favour of pedology, began to be regarded as "counter-revolutionary intentions", so that grave political accusations were brought against many theoreticians in the area of pedagogics and psychology. Pedology was now labelled as a "pseudo-science", and pedologists themselves, as "pseudo-scientists". Understandably, criticism aimed at pedology and pedologists[1] took place in a tense atmosphere of general distrust and was often accompanied by political labels and an off-hand negation of all possitive work accomplished by the criticised persons during their past scientific and pedagogical activities.

As a result, all, or almost all, scientific works dealing with child and pedagogical defectology, psychology, school hygiene, etc. were competely renounced and declared to be harmful and reactionary, the only ground for this being the author's belonging, now or in the past, to some "pedological institu-

[1] During the first half of 1936 alone, over a hundred articles criticising pedology were published.

tion", or even the use of certain "pedological" terms. The voluminous works of the most outstanding Soviet psychologists and pedagogues on the staff of pedological establishments —Blonsky, Vygotsky, Bassov and many others, who made great contributions to the development of Soviet psychology and pedagogics—were for a considerable period simply excluded from circulation among the scientific community.

In one of the critical articles published in the periodical *Soviet Pedagogy* (No. 1, 1937), V. N. Kolbanovsky was accused of the fact that "during the period from 1932 to 1936 he edited: the journal *Psychology* for 1932, the books of Vygotsky, *Thinking and Speech,* Kurt Koffka, *Principles of Gestalt Psychology,* and P. P. Blonsky, *The Memory and Thinking;* wrote reviews on the books by Vygotsky, *Psychological Essays* and L. V. Zankov, *A Course in Pedology, A Collection of Articles on the Pedology of Deprived Childhood,* and similar 'pedological works'." The author of the article did not even try to prove why, for example, he listed the book by Vygotsky, *Thinking and Speech,* or the book by Blonsky, *The Memory and Thinking* among "pedological works", or explain what the content and general trend of the reviews he mentioned. Kolbanovsky, who in the early 1930s repeatedly raised his voice against many pedological positions, was labelled in the article as a "carrier of theoretical pedology" only because he regarded the publishing of Vygotsky's book, *Thinking and Speech,* as an important event in science and said it was the first attempt at a systematic experimental elaboration of the problem, "the only work which contains serious criticism of bourgeois theories of thinking and speech". In the same article, the work by N. A. Menchinskaya, *Psychological Analysis of the Process of the School Pupil's Mastering of Mathematical Principles,* was also, without giving any proof, characterised as full of "pedological distortions". This statement was so absurd that the editorial board of *Soviet Pedagogy* (No. 5-6) had to publish a special note which said that the characterisation of Menchinskaya's work in No. 1 of the journal did not correspond to the truth.

Objecting to the off-hand negation of all valuble material in the works of Vygotsky, Kolbanovsky said at a meeting of heads of pedagogics chairs and lecturers in psychology at pedagogical institutes in August 1936: "The next development zone propagated by Sergei Leonidovich [Rubinstein.—*A.P.*] in his report is, according to Vygotsky, the mental pedological individual age, a position which was renounced by the resolution of the Party Central Committee. How is that mental individual age actually established? By means of methods that have been condemned by the Central Committee. . . The question arises, why the comrades who are speaking in this way of the next development zone, do not go to the source itself? Vygotsky is dead, he cannot defend himself. Yet one can look up some of his remaining works and see how he himself defined the next development zone. Can he be held responsible for all the nonsense that is ascribed to him? It is really unfair to struggle with an opponent in this way—to ascribe to him some nonsense and then refute him. Vygotsky was the first to oppose the standardised way of determining mental development by means of the Binet system of testing. Stating that this kind of measurements can only register what is obtained at the present moment and can never discover what lies deeper, in the very heart of a pupil's development, Vygotsky insisted that the pupil could be assisted by an adult in successfully dealing with a whole range of other problems, and then his next development zones could be determined. This is the genuine meaning of the problem involved in the next development zone. In this definition of his, Vygotsky opposed pedologists. Here is how he himself formulated his thesis: 'Pedologists propose to consolidate, by means of a complex system, that in the child's development which he would actually leave behind as he enters a school. They were oriented only on that which the child can accomplish independently in his thinking and did not take into account the possibility of his passing from what he can do to what he cannot. They assessed the state of development like a silly gardener—only by the

ripe fruit.' This was the main reason for Vygotsky's substantiation of the next development zone."[1]

Regrettably, far from all psychologists could muster sufficient strength to rebuff unjustified accusations and draw lessons from the criticism unleashed by the July resolution on pedology.

Kornilov, for example, in an article in the newspaper *For Communist Education*, branded as "reactionary, bourgeois methods" not only tests and questionnaires, but also so-called objective observation, natural and laboratory experiments, the comparative-genetic method, etc.

Much time passed before chance and unjustified accusations, which nihilistically obliterated all positive results obtained by Soviet scholars in their studies of the child age, were refuted and the scientific prestige and creative independence of Soviet psychology was reinstated.

Let us consider the range of problems dealt with by pedagogical and child psychology in the 1920s and 1930s.

The problem of children's mental development, its sources and patterns has always been central to child and pedagogical psychology. The orientation, as well as the major methods of instruction and education, the approach to the child and identification of his specific characteristics as compared with an adult, all depend on the solution of that key problem.

Two trends appeared in child and pedagogical psychology by the early 1930s, each treating the sources of children's mental development in different ways. The distinction between these trends lay in which of the factors—the biological or the social—was regarded as decisive in that development. Accordingly, they can be called the bio-sociological or the socio-biological trend in child and age-group psychology. The first trend was represented by Ye. A. Arkin, I. A. Arya-

[1] The Archives of the Institute of Psychology of the Academy of Pedagogical Sciences of the RSFSR. Personal Records of V. N. Kolbanovsky. Concluding Speech at the Meeting of Heads of Pedagogics Chairs and Lecturers in Psychology at Pedagogical Institutes of the RSFSR Held on August 26, 1936.

mov, P. P. Blonsky, A. S. Griboyedov et al., and the second, by A. B. Zalkind, A. S. Zaluzhny, S. S. Molozhavy, I. A. Sokolyansky. Of course, such a "classification" is not final and only approximately reveals the prevailing hues in the works of these psychologists. Both trends came under severe criticism in the early 1930s. As a whole, this was conducive to the formation of a true concept of the laws of child development and original concepts of psychological development (Vygotsky, Leontiev, Luria).

Among the works in which the features of the biologistic trend came into bold relief (an attempt to apply biological laws to the studies of child behaviour) are the books by Arkin, *Pre-School Age* and *Personality and the Environment in the Light of Modern Biology*; Aryamov, *Foundations of Pedology, General Foundations of Reflexology,* and *Reflexology of the Child Age;* Blonsky, *Pedagogics, Ideology, Age-Group Pedology;* and works by Griboyedov and the Child Examination Institute published in the periodical, *Questions of Studying and Educating Personality* and in the collections under the title of *The New in Defectology.* The leitmotif typical of all these works was orientation on a child's inborn traits, a tendency to interpret behaviour accentuating the internal-biological influences of primarily constitutional peculiarities of the organism and its endocrine system.

Aryamov and Arkin were apt to combine all these biologistic theses with reflexologism, and Blonsky—with behaviourism which he failed to overcome. The latter attempted to link age periodisation with a system of narrowly biological features (a "teeth" age) and construct on this base "all symptom-complexes of different epochs, stages and phases of the child age". Compliance with the "biogenetic" law which testified to the fact that adherents of this trend overestimated hereditary factors, was particularly characteristic of Arkin and Blonsky.

Underlying the "biogenetic" law in psychology was the idea of the spontaneity of the child's mental development and its independence of education, which was seen only as an extern-

al factor capable of either retarding or accelerating the process of bringing to the surface certain natural, hereditarily-based psychic qualities. In the 1920s and early 1930s, prevailing attitudes towards the "biogenetic" law were represented by four theories which Vygotsky listed in the following order for the sake of convenience as far back as in 1927: 1) the theory of recapitulation (hereditarily-based automatic succession of stages, in which the main line of evolutionary development recurs (Stanley Hall); 2) the theory of selection (analogy between ontogenesis and phylogenesis is explained by the operation of similar determinant causes—chance varieties and selection of useful traits—Edward Thorndike); 3) the theory of correspondence (parallelism of ontogenesis and phylogenesis is explained by the similarity of both lines of evolution, manifesting the same process of organic development (Emile Claparède, Kurt Koffka, Blonsky); and 4) the theory of socio-genesis (the biogenetic law was rejected, since it ignored the social factor, and only certain correspondence between the development of the child and humanity was recognised (Kornilov, Zalkind). Vygotsky was of the opinion that the third and fourth theories were the most consistent. The succession in which he arranged the theories of children's mental development was meant to show the diminishing value of the chief analogy with Ernst Haeckel's biogenetic law and the increasing critical awareness of its true place and dimension.

Vygotsky denied the authenticity of the theories of recapitulation and selection. He believed they demonstrated how pedagogical conclusions of a reactionary character were drawn from the biogenetic law which was applied to divorce the child from contemporary life, to formulate a pedagogical theory of childhood neutral in respect to class and social composition.

The overestimation of the role played by hereditary influences, typical of the biosociological trend, was not reduced to the biogenetic principle alone. The role of hereditary factors was manifestly so exaggerated that no reference to the phy-

logenetic past was needed. Judging from the critical articles published in that period, it was regarded as a major threat. It should be noted, though, that Blonsky's interpretation of human heredity greatly differed from that of extreme representatives of the biological trend. He spoke of social heredity, i.e. the heredity of social conditions governed not by Georg Mendel's laws but by the laws of society. Heredity was not, in his opinion, a simple biological phenomenon. It was necessary to distinguish between "chromatin-heredity" and social heredity, the heredity of living conditions and social position. This idea of Blonsky was correct and exerted a positive influence upon the struggle against the biologistic concept of Karl Bühler with his theory of hereditary "prison inclinations", W. Peters, who insisted that progress at school depended on heredity, and Francis Galton, who held that human propensities to administrative and scholarly professions were inherited.

In this connection, of great interest are the books by Arkin who regarded heredity as the chief factor in age-group psychological development. Like many other psychologists, Arkin placed the "biological and social factors" in close proximity, but recognised the biological factor as the definitive one (which accounts for his affiliation to biosociologism). He considered the environment as primarily playing a regulatory role, organising or disorganising human behaviour, while heredity determined the structural and functional specifics of the mechanisms through which behaviour is manifested, the qualitative and quantitative aspects of the energy typical of the individual, the degree of its plasticity and diversity, as well as the possibilities inherent in it. According to Arkin, both the quantitative and qualitative aspects of the developing personality were determined by heredity, while the environment, the milieu was only a regulator, a "developer", as it were, a certain practically unchangeable factor, with which plastic heredity containing a host of opportunities interacts.

However, the most complete development and elucidation of the biosociological trend can be found in Blonsky's works which were criticised in 1931 and 1932.

Theoretical errors inherent in Blonsky's work, which were largely typical of the entire biosociological trend in age-group and pedagogical psychology and which in the final account were the latest reflections of mechanicism in psychological and pedagogical theory, were convincingly exposed. The following are the main propositions of biogeneticists:

1. *The mechanistic concept of the essence of the child's development.* All the diverse features of the child's behaviour, composing in their aggregate the "age symptom-complex", are explained by the increase in the quantity of matter (the growth of the organism's mass). According to Blonsky, childhood is a period of life when *mt* is a growing value, whereas in an adult, it is a constant value, and in old age it decreases (*m* is the mass, the quantity of matter in an organism, and *t* is time). This mechanism in the interpretation of the essence of the child's development contradicts its dialectical interpretation by Lenin in his notes "On the Question of Dialectics", in which he rejected the reduction of development to the increase or decrease of matter alone.

2. *Biologism in the periodisation of the child's development (dentition).* The periodisation of the child's development was based on the appearance of his teeth: 1) toothless childhood; 2) milk-teeth childhood; and 3) permanent-teeth childhood. Blonsky regarded this kind of periodisation as sufficiently logical and exhaustive. As was justifiably noted by his critics at that time, recommendations to apply this "objective" feature as the only criterion, which allegedly made it possible to quickly, categorically and exactly place the child within a particular age group, was open biologism.

3) *The biogenetic "law" and its application in pedagogy.* Blonsky's mechanicism, as was already noted, was also reflected in an infatuation with the biogenetic law. His error was not that he saw a correspondence between the child's spiritual development and the mental development of his ancestors, but that he treated that correspondence as recapitulation. In 1930, he wrote in his *Age-Group Pedology* that the childhood of permanent teeth can be regarded as the period of the child

being civilised, a period when he should master modern technology. Civilisation is but a recent acquirement of mankind and so cannot be inherited, and therefore instruction has a great role to play in the life of children possessing permanent teeth. Engels wrote: "...Just as the development history of the human embryo in the mother's womb is only an abbreviated repetition of the history, extending over millions of years, of the bodily development of our animal ancestors, starting from the worm, so the mental development of the human child is only a still more abbreviated repetition of the intellectual development of these same ancestors, at least of the later ones."[1]

4. *Attempts to correlate the child's intellectual development to certain biological and physico-chemical factors.* Blonsky, for one, tried to discover the links between the alkalinity of saliva and mental development, between the development of school children and the frequency of their being fed fried meat or the age of their mothers. (It was established that the medium age of mothers of the best pupils was 27-29 years, and that of the worst ones—22-25 years). He tried to descern the connections between the character of mental development and the month of the child's birth (sunny or non-sunny season). There were numerous other correlations which were not in the least convincing, though some of them were based on observations that in themselves were rather interesting and worthy of study.

5. *Testing as the main (the most important, on a par with the anthropometric) method of child studies.* Blonsky and other adherents of the biologicist trend promoted a wide use in Soviet psychology, pedagogy and pedology of diverse tests staged to determine the child's intelligence quotient, which attracted researchers by their "simplicity" and "convenience" due to the possibility to process the results mathematically and thus decide on the child's IQ.

Demands to revise the entire system of testing in accordance

[1] Frederick Engels, "Dialectics of Nature", in: Karl Marx, Frederick Engels, *Collected Works,* Vol. 25, Progress Publishers, Moscow, p. 460.

with new theoretical principles were already voiced during the debates of 1931-1932. Grave mistakes committed in measuring the IQ in workers' children and waifs by means of tests suggested by Alfred Binet and Rossolimo were brought to light, and the organisation of school classes in conformity with the IQ was severely criticised. However, at that time, there was no general and consistent criticism of testing that could suggest a positive programme for child psychology studies (Vygotsky came very close to outlining such a programme) and a "diagnosis of mental development".

This is a brief account of the thinking of supporters of the biosociological concept of development and their critical assessment during debates of the early 1930s. Before passing to a description of another, socio-biological trend in child psychology, we should like to stress that a critical analysis of foreign representatives of that trend, in particular of Karl Bühler, was essential for a critique of biologism from principled positions.

In his Preface to Karl Bühler's *An Outline of the Child's Spiritual Development* (1930), Vygotsky showed that Bühler advanced the elementary, and biological to the fore in the child's development to the detriment of the higher, specifically human, historical and social factors in human psychology. "Bühler's statement that nurseries, mental asylums and specialised schools are the best places for the study of the structure of the human spirit and the chief aspects of its development, is splendid, indeed," Vygotsky wrote. He saw the main shortcoming of Bühler's system, the root of all his errors in his anti-dialectical approach. "Nature does not make any leaps, development is always gradual," asserted Bühler precisely in connection with the problem of animal and human behaviour. For him, there could not be any leap from biology to history. Thus, there could not be any leap from animal psychology to human psychology either. Bühler's theory, like the entire European child psychology, sought to ignore the social in man. In Vygotsky's opinion, this was the central idea, the nub of all theoretical questions.

It is noteworthy that Vygotsky proved Bühler's effort to achieve the complete biologisation of psychology to inevitably produce a reverse effect—the psychologisation of biology. Indeed, the following interpretation was always possible: "do not biological functions, to which in fact the entire human psychology belongs, themselves contain the psychic—or the psychoid, i.e. similar to the psychic—principle?" It is clear that Bühler's strictly "biological" thinking did not prevent him from recognising the concept of the vitalist Hans Driesch.

Mechanicism inherent in the trend under consideration and exaggeration of the role ascribed to heredity and biogenetism—all this, as can be seen, was clearly conceived and reflected in the psychological writings of that period. However, the criticism of biologicist errors was often meted out from positions which were not much more correct themselves—for instance, from those of the socio-genetic concept evolved by Zalkind and Molozhavy.

The views of Zalkind are difficult to characterise because of their exceptional eclecticism and vague methodological position, coupled with an ultra-revolutionary terminology. He demanded a revision from the angle of his socio-biological concept, of practically all vital questions involved in child studies (the biogenetic law, difficult children, sexual instruction, children's collective, heredity and constitution, and many others). He contended that this would be a revision from the positions of "Marxist psycho-therapy", socio-logics. However, there was nothing genuinely Marxist in this concept: for example, Zalkind tried to resolve the problem of sexual development and education in the spirit of the Freudian theory on child eroticism and its social sublimation. It is difficult to reconstruct the socio-genetic concept on the basis of Zalkind's works (even though he was regarded as its forerunner), because it is constantly overshadowed by his general declarations. For that purpose, the works by Molozhavy, another prominent representative of the socio-genetic trend, are much more useful, since here we find a clearcut formulation of the importance of the

factor of the social medium. One can also make use of the works of A. S. Zaluzhny, who specified a number of theses involved in sociogenesis in the studies concerned with children's collectives.

The criticism of the trend in question is all the more important, since it was dominant during the 1920s, in particular after the First Congress on Pedology (1927), at which it prevailed over the biogenetic trends. At a time when child and pedagogical psychology was firmly restructured, the socio-genetic trend presented the chief threat to the productive development of psychological science. This became still more grave because of the latter's close ties with philosophical mechanicism. The biologicist trend was of course also mechanistic, but its mechanicism was more "coarse", more open and crude, and fully corresponding to the naive notions current among naturalists, who often had but a vague idea of Marxist theory. Socio-genetics is another matter. It is well known that in ideology, concealed struggle waged among the trends and camouflaged with Marxist phrases, has always been considered the most dangerous form of struggle. That is why it was necessary to expose the errors committed by socio-geneticists. Their main propositions were as follows:

1. The child's adaptation to the social milieu is the chief factor of his development. "Whatever action of the organism we take—be it an elementary or a complex one, available for immediate observation or hidden under external covers, its nature is the same—restoration of the upset balance with the environment and adaptation to its conditions," Molozhavy wrote in a collection on pedology. "Greenflies will assemble on the side of a vessel which is turned to the light. An ape will put one crate upon another, picking them up all over the cage, climb upon the construction, snatch a stick that is hanging from the cage's ceiling and reach with it for a fruit lying beyond the cage. A child will take a chair to the cupboard, open it and take the sweets put there yesterday in his presence. An engineer will make a draft of a railway much needed by the population of a given locality. And all these proc-

esses are those involved in the organism's adaptation to the medium. . ."

Such statements testify to the fact that the process through which an organism was adapted to the environment was recognised by socio-geneticists mechanistically. Neither the restructuring of the milieu, in the course of which man himself underwent a change, nor his activity during that restructuring was taken into consideration. Criticism of the mechanistic theory of equilibrium, then taking place in philosophy, psychology and pedagogics, was conducive to refuting the thesis of the socio-genetic trend. However, it was not only the accent on the "adaptation to the environment" and "equilibrium with the environment" that was erroneous in the doctrine of socio-geneticists. It was also their interpretation of the environment itself as a developmental factor.

2. The environment is the fatal factor for the child development. To study a human being, socio-geneticists deemed it sufficient to examine the structure of his environment, since in its main and variegated moments it "does not cease to be a system determining the typical features of the people who live under its conditions". Now, what is their interpretation of the structure of the environment, which is "determining" for the people who live "under its conditions"? Let us once again cite a statement by Molozhavy: "The child's environment is therefore first of all the production-labour environment, which determines all his adaptive processes and functions. In this milieu, his constitution assumes its final form, as well as the behavioural mechanism, habits and ways of his actions." Thus, the personality structure and the behavioural mechanism are reflections of the environment. Man's views and habits are given once and for all in his immediate environment. The theory of socio-genesis turned the environment into a factor which determined man's destiny, his psychology and social behaviour.

3. The child's consciousness is diluted in his behaviour and is not taken into account in the investigations. This general thesis typical of behavioural psychology (and reflexology,

too) is regarded as the chief postulate in child studies. It is not the child's ideas and concepts, not his consciousness in general that is a direct and immediate object of pedagogical influence, but his behaviour as a whole which provides him with "orientation and maximal adaptation". As for the child's ideas and notions, they are only "secondary factors", only the "traces of former actions, the vestiges of earlier adaptive acts". In criticising this position, F. F. Korolyov asked: "What is the reason for this contraposition? Why is education reduced to merely regulating actions and deeds? And what about a systematisation of notions, concepts and ideas? What about the shaping of an ideology, the instilling of a dialectico-materialist world outlook? What about a systematisation of knowledge acccumulated by mankind? Is it not an object of education?" And further: "The idea of international solidarity, my awareness of the need to assist the revolutionary movement in India and China, the struggle for tomorrow—all these, it is proved, are just traces of former actions... Molozhavy fails to understand that consciousness born of certain social relations is in its own turn a factor regulating the choice of a behavioural pattern, a factor which regulates man's relationships with the environment. Marx once said: 'My attitude to my environment is my consciousness.' Molozhavy gives another meaning to this formula: 'My attitude to my environment is my adaptation, my behaviour.' "

4. The laws governing the behaviour of a child collective should be sought in the laws of sociology and collective reflexology. A child collective is described by socio-geneticists as "an interacting group of persons which has expressed its ability to collectively react to a particular irritant or a whole complex of these irritants". This and other similar definitions of the collective emerged largely under the influence of "collective reflexology", which, as we have already seen, was nothing but a variety of the psychologisation of sociology. The definition we cited, in the opinion of its creator, was to apply both to the simplest child groupings and to the most complicated associations of people. However, the mechanistic error con-

tained in this definition lay precisely in its "universality", which slurred the qualitative specific features typical of each collective.

In this point, more than in all others, the positions of socio-geneticists came close to those of adherents of biologism, being underlied by the general platform of mechanicism. For example, A. Zaluzhny by no means looked for anything specific in human associations (social groups, collectives), but—though with certain reservation—for a similarity with the organic world: "Though a human group is a unity of quite a different type than an organism, it resembles an organism in that its unity is manifested not only in interaction but also in the reactions." Thus, in his search for "commonality", the author arrives at a biological interpretation of social phenomena in the spirit of collective reflexology. "If explanations of an individual's behaviour by reflexology laws were erroneous, they are doubly erroneous with respect to a collective," wrote one of the critics of Zaluzhny's views.

In the period under review (the early 1930s), all fundamental propositions and problems of pedagogical and child psychology were revised and reassessed from the angle of their usefulness for socialist upbringing and education. One result of this process was disclosure of the inconsistency of both the biologistic and sociological trends in child psychology in all their main theses.

Criticism of the "theory of two factors" made it possible to come to yet another important conclusion. Neither biogeneticists nor socio-geneticists could provide an adequate characterisation of the child's evolution under the conditions of his social life. Nor could they reveal the role of the collective in the formation of his personality. Meanwhile, further development of pedagogical psychology was being obstructed because of the discrepancy between the task of bringing up children in a socialist labour collective and the general individualistic interpretation of the child's personality. This contradiction was overcome in the work of the outstanding Soviet pedagogue Anton Makarenko.

The role of psychology in Makarenko's pedagogical views was quite remarkable, and his own ideas played a great role in the history of Soviet psychology. It would be no exaggeration to state that even today Soviet psychological science draws upon his views as one of its sources. Makarenko's views were formed during the 1920s and the first half of the 1930s, in the struggle against erroneous concepts of the child's personality and his development then current in pedagogy and reflexology. By the mid-1930s, they had evolved into a complete theory on the formation of the personality in a collective, having summed up Makarenko's own vast pedagogical experience. This theory became the basis for the entire subsequent activity of Soviet pedagogues and psychologists in upbringing and education.

Makarenko repeatedly and unequivocally spoke of psychology as being a close ally of pedagogy. He expressed the hope that very soon, psychology would develop scientific propositions on human behaviour. He always read everything which came his way in Russian on the subject of psychology. In his Gorky Colony he established a consulting room for psychological observations and experiments. "I like psychology, and I think the future belongs to it," he wrote in August 1922.[1] However, his understanding of the great role of psychology in achieving educational goals did not prevent Makarenko from seeing the serious shortcomings inherent in psychological science in that period and to critically assess them. His criticism was based on the needs of educational work, which were not met by the psychological theory of those years. Makarenko's high esteem of psychology's opportunities is inseparable from his criticism of the biogenetic and socio-genetic theories which overestimated age development. "Our theoreticians," he wrote in 1932, "on the one hand, negated all biological inclinations of the moral sphere, thinking that everything depends on the environment and education, and simultaneously, on the other hand, wished to prop up man's education with reflexol-

[1] A. S. Makarenko, *Works*, Vol. VII, Moscow, 1971, p. 401.

ogy, counting on bringing up a new man exclusively on the basis of studying conditioned reflexes."[1] Pedagogics' reflexological interpretation, which was especially widespread in the Ukraine where Makarenko worked at that time, met with his opposition.

Makarenko also criticised so-called individual psychology. "I consider individual psychology non-existent. . ." However, this is not at all to say that Makarenko was inclined to ignore an individual approach to man. He is famous for the subtlety of his psychological analysis. The references he wrote for his pupils (and he wrote a great many of these), the brilliant psychological portraits of colony charges and teachers he gave in his *The Road to Life* and other books, his profound generalisations and portrayal of psychological types in his *Book for the Parents* reveals Makarenko's talent for describing an individual's psychology. His criticism of "individual psychology" was actually a critique of functionalism in the psychology of personality since educational practice could not derive anything useful for itself from the variegated postulates of individual psychology, its diverse "personality classifications", "reference programmes", and the like. As far back as 1923, Makarenko wrote of the integral study of man, which would overcome the functionalism of all kinds of "scholarly classifications": "Still, it is a question of dividing up our charge into many component parts, of enumerating them and giving a name to each, arranging them in a certain system and . . .finding oneself at a loss as to what to do further. All the recent works follow precisely this line. . . . It seems to me that we are still very far from having the right to dismember a person and still less to draw any practical conclusions on this ground. On the contrary, we must strive to master a synthesis, a whole indivisible person and learn how to organise education in such a way that our achievements would be characterised by an improvement of the system of the given personality as a whole." The method of pedagogy stems

[1] A. S. Makarenko, *Works*, Vol. II, p. 396.

from correctly understood educational goals, and "practical pedagogy" must "dialectically proceed from political needs, not only of the present, but of our socialist construction, of a communist society".[1] Hence the definition of the relationship between psychology and pedagogics: "The knowledge of psychology, of the child's soul, of each individual person will only help us to apply our method in the most convenient way in one case, and slightly differently—in another." And the fact that the knowledge of psychology can be of exceptional use for a correct application of methods of pedagogical influence, has been corroborated by the experience of Makarenko himself, reflected in his numerous works.

The problem of the psychology of personality was central in Makarenko's psychological concept. He formulated it as the question of the relationship between a personality and the collective, of the promising lines of personality's development, of the formation of personality's motivational sphere, and at last, as the question of moulding a character. The focal points of the problems involved in personality mainly emerged as he polemicised with the biogenetic and socio-genetic interpretation of the relationship between a personality and the collective: "We are already well aware of what is a collective. It is not, of course, 'a collection of individuals reacting in a similar way to certain irritants'. . . A collective is a free group of working people united by a single purpose, a single action, organised and possessing administrative bodies, disciplined and responsible."[2] Or: "One of . . . the theoreticians describes the collective in this way: 'The collective is a group of interacting persons, who jointly react to certain irritations.' Any unbiased person can see that this is a definition of a collective of frogs, apes, molluscs or polyps—in fact, of anybody but people."

The definition of the collective proposed by Makarenko is conducive to resolving the question of the place a personality

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[1] *Ibid.*, Vol. VII, pp. 362, 449.

[2] *Ibid.*, Vol. II, p. 396.

occupies in the collective and in the system of human relations: "The collective is goal-oriented complex of individuals who are organised and possess special bodies typical of a collective. If there is an organisation of the collective, there are also bodies of a collective and an organisation of authorised persons empowered to act on behalf of the collective, and the problem of the relationship between comrades is not a question of friendship, or love, or neighbourhood, but that of responsible dependence." Such a presentation of the question enabled Makarenko to exert considerable influence on moulding personality, while changing the individual's position in the collective. Moreover, that influence was exerted so cautiously that the individual did not suspect he was an object of education (the principle of parallel action). "We are concerned only with the group. We are not concerned with the individual. This is an official formula. Essentially, this is a form of influencing precisely the individual but the formula is parallel to the essence. Actually, we are dealing with personality while asserting that we are not in the least concerned with it."[1]

Makarenko attached great importance to the investigation of traits characteristic of human personality. This can be explained primarily by the fact that he saw the goal of the educational process as forming personality qualities, character types and particular personality traits. The very listing of personality features which are synthesised into a single whole ("the person's safe inclusion into a collective, the nature of his collective ties and reactions, his discipline, readiness for action and retardation, tact and orientation, principles and inclinations") testify to a profound psychological analysis of Soviet man's essential traits. The plan he outlined for the study of the personality of pupils in his *Methods of Organising the Educational Process*, is detailed and scientifically based. The goal is formulated in the very first sentence: "What must an educator know of each of his charges?" The excellent references Makarenko wrote for his pupils, which describe, in a laconical and precise

[1] A. S. Makarenko, *Works*, Vol. V, pp. 196, 396.

manner, those features of their personality that should be projected, also reveal the depth of his knowledge of their psychology.

Makarenko was engaged in profound research into the motivational sphere of the personality, the mechanisms of moulding its socially-valuable qualities. The problem of moulding and developing human needs is accorded a major place in his investigations. "The deepest meaning of educational work and especially of the family collective consists in the selection and cultivation of human needs, in raising them to an ethical level attainable only in a classless society, the only one that can induce man to work for his further perfection."[1] The problem of human requirements as a dynamic aspect of Soviet psychology is most fully probed in Makarenko's works. In the mid-1930s, his ideas on the need to regulate, direct into a certain channel and mould the child's requirements, as well as his demands to instil discipline and the sense of duty, were still at times attacked in pedagogical literature.

The solution to the problem of motivation of human actions proposed by Makarenko was not immediately assimilated by pedagogical and psychological science, and did not right away become the basis for further development of the fundamental principles of the methodology adopted in communist upbringing and in the psychology of the personality. His works contained a broad programme for studying the motive forces behind the development of the substantial powers of the human personality, in which the prime aim was instilling in man the needs typical of a collectivist individual. "A morally justified need is the requirement of a collectivist individual, i.e. of a person connected with his collective by a single goal of progress, a single struggle, a vital and indubitable awareness of his duty to society. With us, requirement is the sister of duty, obligation and capabilities, it is a manifestation of the interests, not of a consumer of social benefits, but of an active figure in socialist society, a creator of these benefits."

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[1] *Ibid.*, Vol. IV, p. 39.

In the works of Makarenko, Soviet psychologists could see for themselves the vast opportunities for analysing an integral human individual in the process of its moulding in labour and social activity. Makarenko's most valuable feature as a psychologist was that he fully overcame passive contemplation in conducting psychological research into personality. "The knowledge of a pupil must not become available to an educator in the process of his uninterested study, but only in the process of joint work and the most active assistance to him. An educator must see his charge not as an object of study, but as an object of education."[1] The honour of discovering the natural experiment in psychology fell to the prominent Russian psychologist A. F. Lazursky. However, it was outstanding Soviet pedagogue Anton Makarenko who applied, on a broad scale and in a versatile manner, this active method for studying and shaping personality. His works launched a long series of investigations into the psychology of personality and its development in a collective. Makarenko's contribution in laying the groundwork of pedagogical psychology cannot be overestimated.

There were four factors necessary for characterising, if only in a few words, the phenomena which developed in child and pedagogical psychology in the late 1920s and the early 1930s, and assumed considerable importance in the comparatively recent past.

First of all, as was noted, it was the criticism of biogenetic and socio-genetic propositions, as well as their rapprochement based on the theory of convergence in the spirit of William Stern. This actually was not so much the overcoming as the compounding of the shortcomings intrinsic in both the biologistic and sociological trends in child psychology.

Secondly, it was the vast work by Soviet scholars in pedagogical and child psychology in conformity with the social order linked to the unprecedented upsurge of mass education in the Soviet Union. These studies contained rich scientific-re-

[1] A. S. Makarenko, *Works*, Vol. V, p. 91, Vol. IV, pp. 39-40.

search material which, despite the fact that part of it soon became outdated and another part came under criticism because of its erroneous principles, was still organically included into contemporary child and pedagogical psychology, which in the late 1930s and early 1940s shifted to the theoretical basis of Marxism.

Thirdly, in the same period, the system of views on a child's personality and a child collective was created by Anton Makarenko and won recognition. Subsequently, this pedagogical and psychological system became the reference point for a whole series of psychological investigations dealing with the problem of personality development in a collective.

And, fourthly, a promising scientific conception of promoting the child's mental development was formulated, the theory of development of higher psychic functions elaborated by Vygotsky. In the course of its evolution and the efforts put in in its methodological completion, scientific collectives emerged. These included Vygotsky's associates—A. N. Leontiev, A. R. Luria, L. V. Zankov, P. Ya. Galperin, A. V. Zaporozhets, D. E. Elkonin, L. I. Bozhovich, I. M. Solovyov, Zh. I. Shif, T. A. Vlassova and many others in Moscow, Leningrad, Kharkov and other cities.

This system of views, developed in the late 1920s, was initially influenced by diverse and essential peculiarities typical of the development of psychology at that time which provided the basis for its severe criticism during the 1930s.

However, this criticism revealed the essence of this doctrine —the idea that the development of the human psyche was a historical phenomenon. In assessing the statements of that period linked to the so-called "cultural-historical theory" and considering their critical pathos, it should, however, be noted that concrete accusations directed against Vygotsky (for example, by P. I. Razmyslov concerning the rapprochement between the views of Vygotsky and those of Emile Durkheim), were not justified. It should also be stressed that the overall onesidedness and bias of those who engaged in that criticism (since they all identified Vygotsky's psychological concept with

the views of Lucien Lévy-Bruhl, Jean Piaget, Emile Durkheim) completely ignored Vygotsky's distinctions from them. They also left in doubt Vygotsky's reliance on the ideas of Marx and Engels, in particular on those formulated by Engels in his book, *Dialectics of Nature,* and especially in the article "The Part Played by Labour in the Transition from Ape to Man", as well as on Russian revolutionary-evolutionists (V. A. Wagner, A. N. Severtsov). Their estimate of Vygotsky's closeness (especially in the earlier period of his activity, i.e. in 1925-1928) to Pavlov's views was also one-sided, since it was treated as a concession to mechanicism and consequently a drawback.

As he tried to trace the origin and evolution of mental functions, Vygotsky turned to Wagner's ideas, in particular, the concept of "evolution along pure and mixed lines", which he recognised as "central to clarifying the nature of higher psychic functions, their development and distintegration". The appearance of a new function proceeding "along pure lines", i.e. the emergence of a new instinct, or a variety of an instinct which leaves intact the entire system of functions that emerged earlier, is the fundamental law of the evolution of the animal world. The development of functions along mixed lines is mostly characterised by a structural modification of the entire psychological system, and not by an appearance of new features. It is quite insignificant in the animal world. For the human consciousness and its development, as the investigations of man and his higher mental functions reveal, Vygotsky stressed, of primary importance is the modification of interfunctional links and the dominant interdependence of the child's mental activity at each age rung rather than the evolution of each psychic function ("development along pure lines"). "As a whole, the development of consciousness consists in the modification of the relationship between the individual types of activity, in the modification of the relationship between the whole and its parts."

These propositions are undoubtedly of great value. However, Vygotsky, like Wagner, would not have found the key to

fathoming human consciousness and understanding the laws governing the development of man's higher psychic functions "along mixed lines", had he remained within the bounds of comparative psychology. As it was, he was guided by the works of Marx and Engels, and also of Pavlov, particularly in his statements concerning the signal systems. These ideas constituted the basis of Vygotsky's theory on the development of higher functions, even though he drew on quite heterogeneous material to prove his conception and relied on the authority of quite different doctrines.

Vygotsky began to investigate higher mental functions from the point where comparative psychology recognised its defeat, since it could not explain development of the human consciousness by the law governing biological evolution. He thus succeeded in formulating his own concept of man's mental development. "It is impossible to assume that labour, which radically changed the character of man's adaptation to nature, is not connected with the modification of the type of human behaviour, if one believes together with Engels that the tool constitutes a specific human activity, man's transforming impact upon nature, i.e. production."

We can clearly discern the foundation on which Vygotsky based his hypothesis on the origin and structure of higher mental functions: "Is there really nothing in human psychology, in the development of behaviour that would correspond to that distinction in the relationship with nature that sets man apart from animals and is implied by Engels when he says that 'the animal only makes use of the external nature, while man dominates it'? And further: 'However, no purposeful actions by all animals could impose an imprint of their will upon nature. That could only be done by man."[1]

This distinction of human psychology (corresponding to the role played by labour, the use and manufacture of implements

[1] L. S. Vygotsky, *Development of Higher Mental Functions*, pp. 80-81.

in object-oriented, productive human activity), consists in the mediated character of his mental activity. Thus, an analogy between an implement and a sign (a word, numerical symbol, etc.) emerges in Vygotsky's concept, which is based on the mediating function possessed by both. In psychological terms, the similarity between an implement and a sign consists in their belonging to the same category, i.e. mediation, and their difference lies in their different thrust. An implement is, as it were, directed outwards, since it must cause certain changes in an object: it is a means of man's external activity, directed at mastering nature. A sign, in its turn, is directed inwards, it does not produce any changes in the object of a psychological action but exerts an impact on its own or alien behaviour. However, the mastering of both nature and behaviour are mutually connected, since a change effected in man's nature modifies the nature of man himself.

The use of signs (auxiliary means), i.e. transition to a mediating activity fundamentally restructures, in Vygotsky's opinion, the entire mental activity, as for example the application of implements modifies the natural operation of certain organs and vastly strengthens and extends the system of mental activity. Vygotsky's understanding of the function and origin of a sign (in Vygotsky's definition, a sign is any conditioned stimulus, artificially created by man, which is a means of mastering behaviour), is very close to Pavlov's interpretation of a word as "the signal of signals" to which Vygotsky repeatedly referred. Words as "the signals of signals" (Pavlov) and signs as "artificial stimuli—means" (Vygotsky) both introduce a new (in comparison with animals) "regulatory behavioural principle". They create a signalling apparatus, a system of artificial conditioned stimuli, which are conducive to the creation of any artificial links and produce the required reactions on the part of an organism, effecting the social determination of behaviour.

Thus one of the most important ideas in this conception—the mediated character of development of higher mental functions—is mainly connected with Vygotsky's projection of a

number of fundamental Marxist propositions into psychological research.

Another radical idea of Vygotsky, that of internalisation, which was elaborated subsequently in the works of many Soviet psychologists, in particular in those by A. N. Leontiev and P. Ya. Galperin, was also linked to the attempt to develop Marxist theory. Vygotsky tried to discover a dialectical law governing the formation of human mentality that would reflect the substance not only of the development of individual functions but of the personality as a whole. Thus the problem emerged of the relationship between external and internal mental functions. In his search for a purely logical expression of this law, Vygotsky turned to the Hegelian three stages of development. However, as distinct from many other factors, he applied them not in a formal way, but dialectically, taking into consideration the internal development of mental functions in its major contradictions.

Vygotsky formulated the general genetic law of cultural development as follows: "Every function of the child's cultural development enters the scene twice, and on two planes. First on the social and later on the psychological; first between people, as an inter-psychic category, and later inside the child, as an intra-psychic one."[1] "Every higher mental function necessarily passes through an external stage in its development, because it is initially a social function." Vygotsky traced the succession of the three basic forms of development on the examples involved in the formation of indicative gestures and speech in children. The word expresses an attitude towards a thing; that is the first stage. This objective link between the word and a thing is used by an adult functionally, as a means of communication with the child—that is the second stage. The word acquires a meaning for the child himself—that is the third stage. The chief idea in this is that every higher mental function was a social one before it became

[1] L. S. Vygotsky, *Development of Higher Mental Functions*, pp. 197-98.

an internal, genuinely mental function; initially it was a social relationship between two persons.

From this idea Vygotsky passed to the interpretation of the process of the formation of personality as a whole: a personality becomes for itself what it is in itself, and through that which it presents for others. All higher mental functions are internalised relationships of the social order, the foundation of the personality's social structure. "Modifying the well-known thesis of Marx, we could say that man's psychological nature is a totality of social relations transferred inwards and becoming personality's functions and the forms of its structure. This is not to say that this is the precise sense of Marx's thesis, yet we see this thesis as the fullest expression of everything to which the history of cultural development leads us."[1]

Thus Vygotsky's solution to the problem of internalisation is different in principle from Bühler's and Ernst Kretschmer's who also pointed to instances when behaviour was transferred from the outside to the inside. Vygotsky's solution consists in a dialectical transformation of the social, collective into the mental, individual. This resolution of the problem emerged in the course of his creative mastering of the ideas of dialectical materialism. Understandably, the role of the collective in a child's development was also represented by Vygotsky in a different light: higher psychic functions first emerge in a collective in the form of relations between children, and then become the personality's mental functions.

Yet another aspect of Vygotsky's conception is of interest, e.g. his interpretation of the correlation between education and mental development. He firmly opposed the biologistic understanding of the evolution of mental processes, according to which education had only a passive role to play. In his article, "The Problem of Education and Mental Development at a School Age" (1934), Vygotsky criticised the theory of development and learning of Jean Piaget, which said development and maturity were more of a prerequisite than a result

[1] L. S. Vygotsky, *Development of Higher Mental Functions*, p. 199.

of education, which supercedes development, while not producing in it any essential changes. Vygotsky also objected, for example, to the assertion that learning should be identified with development. On this point, he argued with William James, maintaining that the latter's doctrine was no less fatalistic than Piaget's since it also treated the laws of development as natural laws, which cannot be changed by instruction and education. Vygotsky also disapproved of Kurt Koffka's theory which constituted an attempt to overcome the extreme viewpoints exemplified by the former two doctrines by combining them (Koffka maintained that development was independent of education, though education itself was identical to development). Vygotsky correctly noted the dualistic character of this theory and sharply criticised its many contradictory points.

Vygotsky's critical analysis of the three groups of theories of mental development (which clearly manifested features typical of the biosociologisatory and the socio-biologistic conception, as well as of that of convergence applied to the problem of the correlation of development and education) enabled him to debunk all three and present his own explanation of that complicated relationship. He proposed a hypothesis, epitomised in his next development zone concept, according to which development processes and processes involved in learning did not coincide, the former following the latter. He sharply criticised the IQ tests widespread at that time, and proved that education was actually the determining motive force in development. Only the forms of instruction changed in the course of development, he stated. Vygotsky examined processes involved in the mental development of children of the preschool and the school age, and described specific forms of learning most suitable for each. The fundamental theoretical significance of these propositions by Vygotsky can readily be seen. In stating that learning serves to shape mental development and that assimiliation of knowledge does not leave intact the structure of mental processes but creates new and quite special forms of spontaneous and conscious mental activity, Vygotsky closely approached a new materialist under-

standing of mental development, which before him had not been clearly reflected in psychological studies. Vygotsky formulated the idea that the assimilation of general human experience which takes place in the process of learning, is an important form of mental development inherent in man.

While not shutting our eyes to certain shortcomings characteristic of Vygotsky's conception (for example the unjustified countering of the development of "natural forms" of mental functions to that of "cultural forms", an interpretation of the process of socialisation as a result of assimilation of sign and symbol forms, etc.), it should again be stressed that his own works and those of his associates contained the initial outlines of a scientific theory of the development of the mind. During the course of subsequent years, both Soviet and foreign authors repeatedly turned to Vygotsky's works for fruitful ideas which they made use of in evolving the theory and in the practice of child and pedagogical psychology, and in advancing many other branches of psychology, in which the problem of development occupies the central place.

Chapter Nine

FORMATION OF PSYCHOTECHNIQUES AND THE PSYCHOLOGY OF LABOUR

Socialist construction which had begun in the Soviet Union, made demands on each of its active participants as a personality with its own intrinsic set of requirements, habits, skills and capabilities. This provided a stimulus to the development of one of the most important branches of psychology—the psychology of labour. In the period under review, problems involved in the psychology and psychophysiology of labour were included in the competence of so-called "psychotechniques", a special department of the science of psychology which set itself the goal of achieving practical aims by psychological means and of applying the laws of human behaviour (the "subjective factor") to exert a purposeful impact on man and regulate his behaviour.

Psychotechniques, which is a variety of applied psychology, appeared in the early 20th century and was theoretically substantiated in the works by William Stern, Hugo Münsterberg and other experimental psychologists. Unification into a system of psychotechnical knowledge of hitherto unconnected studies in the sphere of applied psychology, occurred undoubtedly in connection with the movement for the scientific organisation of labour (SOL) which initially emerged in the USA (Taylorism). That new theory took into account not only objective factors inherent in the labour process, but also the "human factor" involved in work. Psychotechniques and Taylorism were aimed at intensifying the exploitation of workers. It opposed the advancement of ordinary working people to high positions in science and industry, while facilitating such

advancement for representatives of the bourgeoisie. The pretext advanced to shut the doors of factories to objectionable people was their so-called unfitness and incompetence; it "proved" the intellectual supremacy of white people over the coloured, etc.

Psychotechniques obtained conditions necessary for its intensive development in the movement for the scientific organisation of labour initiated by American Frederick Winslow Taylor. It also shared the dual nature of the Taylor system. Here is what Lenin wrote about it: "The Taylor system, the last word of capitalism in this respect, like all capitalist progress, is a combination of the refined brutality of bourgeois exploitation and a number of the greatest scientific achievements in the field of analysing mechanical motions during work, the elimination of superfluous and awkward motions, the elaboration of correct methods of work, the introduction of the best system of accounting and control, etc. The Soviet Republic must at all costs adopt all that is valuable in the achievements of science and technology in this field."[1] Elsewhere Lenin again spoke of "its positive and negative aspects", meaning the Taylor system.[2]

Lenin's characterisation of the bourgeois "scientific organisation of labour" can be with perfect justification extended to its psychological *alter ego*—the psychotechniques and psychophysiology of labour which evolved in the West, since they, like Taylorism, demonstrated the same positive and negative aspects which Lenin noted.

It was believed in the 1930s and 1940s that recognition of psychotechniques and its transference to Soviet soil constituted a serious mistake, the responsibility for which should be borne by the leaders of psychological science. This view, however, cannot be regarded as valid and historically correct. The

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[1] V. I. Lenin, "The Immediate Tasks of the Soviet Government", *Collected Works*, Vol. 27, p. 259.

[2] V. I. Lenin, "A Fly in the Ointment", *Collected Works*, Vol. 33, p. 368.

problem did not consist in whether psychotechniques should or should not be borrowed from the West: of course it should, because, as Lenin pointed out, to learn to work truly constituted an overall national task for the Soviet Republic. Moreover, that task could not be accomplished without drawing on the "latest achievements of capitalism", exemplified by Taylorism and psychotechniques. The main question was how to apply this system, how to determine what was positive and what negative in it, how to make use of the former while discarding the latter, and how to radically modify its method adjusting it to the needs of socialist construction. That was the problem Soviet psychologists had to tackle; and they made every effort to grapple with it during the entire period under consideration. At times they committed errors, of course, but on the whole they followed an objectively correct path of reconstructing psychotechniques along socialist lines and making use of its positive elements in production. The clear-cut and principled leadership of Krupskaya as well as her views on the content and forms of psychologists' work involving psychotechniques in general and at school in particular played an important role in this work.

Nadezhda Krupskaya knew very well Lenin's position with respect to the scientific organisation of labour. Moreover, she took an active part in his work on the article "How We Should Reorganise Workers' and Peasants' Inspection", which Lenin wrote when he was already gravely ill and which contained his proposals to be considered by the 12th Congress of the Communist Party. The diary of the secretaries on duty during Lenin's illness which were subsequently published, contains the following entries: "January 20, 1923. Vladimir Ilyich called me today between 12 and 1 o'clock, and read his article 'How We Should Reorganise Workers' and Peasants' Inspection'. He made a few additions and certain changes, and said that Nadezhda Konstantinovna must give him information concerning one part of the article, and asked Lydia Alexandrovna [Fotieva.—*A.P.*] to find out the same: which and how many institutions on the scientific or-

ganisation of labour were there in our country, how many congresses were held on it and which groups took part in them. Were there any materials in Petersburg (he was sent the same material Nadezhda Konstantinovna had, only a little bit more detailed)."[1] This reveals that Krupskaya's assessments of the problems of psychotechniques is of very great significance. As we examine the assessments, we cannot but be convinced that they are permeated with the spirit of Lenin's instructions and can well serve as the basis for an overall evaluation of Soviet psychotechniques.

This is what Krupskaya wrote, for example, in stressing that "psychotechniques can be exceptionally valuable" in selecting students for the factory trade schools and that regrettably it is with us in a "really primordial state": "Meanwhile, it is one of the most interesting branches of science, which is being already widely applied, for example, in Germany and America. But a capitalist approach distorts the nature of psychotechniques. I have looked through the German magazine *Industrial Psychotechniques*. How do they determine a worker's fitness? They not only take into account his sense of space, development of his attention and its scope, i.e. how many things he can observe at one and the same time; they not only pay attention to these aspects but select workers according to their ability to get along with different people, not to stick to their own opinion, etc. The entire psychotechniques, and the magazine itself, are of an arch-bourgeois character. During the war it had been done very much in the sphere of psychotechniques, which was drawn upon to determine what abilities should be possessed by a pilot, driver, etc. in order to preclude uncalled-for accidents. That is all right, of course, but bourgeois psychotechniques demands that the worker possess a number of working features which would satisfy the bourgeoisie... Here it is not the question of the demands presented by science but by the bourgeoisie. Bourgeois psychotechniques should be discarded; only that should be taken

[1] *Voprosy istorii KPSS*, No. 2, 1963, p. 79.

from it, which is really of use, what makes it easier to provide every one with a job in accordance with his abilities."[1] It should be noted that in 1927, when the cited article was written, i.e. in the period when psychotechniques was developing and assumed due organisational forms in Soviet Russia (from May 29 to June 3, 1927 the First All-Union Conference on the Psychophysiology of Labour and Vocational Selection took place, and in the same 1927, the All-Russia Psychotechnical Society was established), the view was widely spread among Soviet psychologists and supporters of psychotechniques that it was a "supra-Party" and "supra-class" phenomenon, and that it was only "a technical improvement". Krupskaya rejected the notion of the allegedly non-Party nature of psychotechniques in the passage we have cited. She also repeatedly emphasised this elsewhere.

While attaching great importance to psychotechniques both in fulfilling the tasks of vocational selection and in creating conditions that would be conducive to the development of certain qualities indispensable for a particular trade, Krupskaya emphasised that it would be a mistake to overestimate the opportunities linked with psychotechniques (this mistake was actually committed by some leaders of the movement for introducing psychotechniques in psychology). On June 26, 1936, she wrote in an article in *Komsomolskaya Pravda*: "There is a number of professions for which special qualities are required: a good ear, keen eyesight, special sensitiveness of touch, highly trained nervous centres, etc. These questions are dealt with by a special science—psychotechniques. It is of vast importance for selecting the most suitable people for a number of professions. It can prevent people from making mistakes in choosing a trade. Yet it would be just silly to reduce everything to psychotechniques alone. This is an auxiliary science. The chief thing that determines the choice of profession is the social system."

Thus, it is clear that Krupskaya interpreted psychotechniques

[1] N. K. Krupskaya, *Pedagogical Works*, Vol. IV, pp. 156-57.

as an important branch of psychology, indissolubly linked with the scientific organisation of labour and capable of being exceptionally useful to both production and school. She clearly distinguished between psychotechniques that protected the interests of capitalist society and Soviet psychotechniques, whose aim was not only to select a person for a certain kind of job and to choose a certain kind of job for a particular person, but to thus promote the person's education, elevating him to a "higher level of development". "Socialist psychotechniques must pay particular attention to the worker, to how a particular trade can advance his comprehensive development and bring him satisfaction in his work and the joy of labour. Experience demonstrates that the job providing the greatest satisfaction is as a rule precisely the one which can be of the greatest use for production."[1]

The history of psychology of labour and psychophysiology of labour (psychotechniques)[2] in the Soviet Union is highly illustrative of the restructuring of science, which first developed under the capitalist system and was then rebuilt along the principles of Marxism and put to the service of building socialism.

The first stage of the development of psychotechniques in Soviet Russia was closely connected with the SOL movement and initially amounted to the assimilation of key concepts and advancements achieved in Western psychophysiology of labour and psychotechniques. It was the time when Soviet psychologists became acquainted with foreign (predominantly German) literature on the subject. A profound influence was exerted over them by the Hamburg psychological school headed by William Stern, as concerns general theoretical principles, and by German psychotechnicians Walter Moede and Piórkowski in the methodology of psychotechnical tests and apparatus. Somewhat later, the Alpha & Beta tests applied in the U.S. army also had an impact, though a much weaker one.

[1] N. K. Krupskaya, *Op. cit.*, Vol. IV, pp. 248, 499.

[2] The concepts of psychotechniques and psychology of labour have never been completely identical.

In 1921, the First All-Russia Initiative Conference on a Scientific Organisation of Labour and Production was convened. V. M. Bekhterev presided and several reports were presented on the psychology of labour.

The majority of the conference's participants deemed it necessary to meet the demand of the time by shifting psychology to the study of practical production, primarily labour problems. However, they approached these problems mechanistically, only identifying human labour and work in physical terms and ignoring social conditions of labour processes in investigating, for example, fatigue, etc. Reflexologists in their reports eliminated all qualitative differences between the work of a mechanism, an individual and a collective. They declared that "nature knows no leaps" and regarded all these forms of work as an object of study by a "single science on work or labour".

The differences of opinion revealed at the Conference were typical of the major trends in the polemics over psychotechniques. After the Conference, a struggle was waged against idealism in the approaches to the subject-matter and methods of psychology of labour, on the one hand, and mechanism, on the other. The Conference took place in the period directly following the policy of War Communism (1918-1920). Thus, understandably, there were not yet any conditions for research into general psychology and psychophysiology of labour, and psychotechniques was only discussed in terms of possibility. The need for the elaboration of psychotechnical problems was extremely acute. However, the actual deplorable situation in this respect reflected a low labour productivity, which in turn was due to insufficient material resources for the stimulation of labour, while new, highly ethical psychological stimuli were yet to win over the people. Psychologists of labour failed to notice what was immediately discerned by Lenin, who wrote in his article, "A Great Beginning" in 1919 in respect to Communist Subbotniks: "It is a beginning of exceptionally great importance. It is the beginning of a revolution that is more difficult, more tangible, more radical and more decisive than

the overthrow of the bourgeoisie, for it is a victory over our own conservatism, indiscipline, petty-bourgeois egoism, a victory over the habits left as a heritage to the workers and peasants by accursed capitalism."[1]

Theoretical and practical work in the field of psychology and psychophysiology of labour greatly activised with the introduction of NEP which intensified labour productivity and improved labour discipline. Many new tasks were formulated not only in industry, but also in agriculture, commerce, etc. Soon research into the psychological components of labour was divided between two systems: first, the institutions directly concerned with labour, such as the Central Institute of Labour (CIL) in Moscow, the All-Ukrainian Institute of Labour, and also institutes set up in other cities. Second, the psychotechnical laboratories of other scientific institutions. Over a number of years, the two groups of psychologists and psychophysiologists of labour were engaged in heated debates on many questions.

In 1927, the All-Russia Psychotechnical Society (later renamed the All-Union Society of Psychotechniques and Applied Psychophysiology), was set up. By 1930, there were 500 psychotechnicians registered in the Soviet Union, and in 1936, the Society already had a membership of 900 members.

During three and a half years, from early 1927 to mid-1930, more than four hundred books and articles dealing with psychotechniques were published.

The Soviet public has always taken to heart psychological investigations. *The Soviet Psychotechniques contained* a special section which informed the readers about all new publications on psychology of labour. Other magazines also provided vast information on psychological literature. For example, *Psychophysiology of Labour and Psychotechniques* published excerpts from thirty-two newspaper reports clarifying the work of psychophysiological laboratories, an experi-

[1] V. I. Lenin, *Collected Works*, Vol. 27, p. 259.

mental flight of 6.090 kilometres, the five-day working week examined from the angle of psychophysiology of labour, psychotechniques applied for retraining 906 engine-drivers in Sverdlovsk, psychotechnical tests for engine-drivers, tram-drivers, and chauffeurs. Work in psychology of labour became in those years an organic part of the great effort stimulated by the upsurge in socialist construction. The recruitment of a labour force, the movement of exemplary workers, the struggle against the lack of personal responsibility and wage-levelling, retraining of workers, vocational training, rationalisation and organisation of labour—all this is a far from complete list of urgent tasks confronting psychotechniques. Psychotechniques was widely applied in diverse fields—raising labour productivity in industry and the socialist sector of agriculture, strengthening the country's defence capability, polytechnisation of school—during the first few five-year plan periods. Hence the emergence of the three major branches of psychotechniques and psychophysiology of labour: industrial psychotechniques and psychology of labour; military psychotechniques, and psychotechnical work at school.[1]

The report of the All-Russia Psychotechnical Society to the government stated: "The main spheres of psychotechnical work are industry (in particular, transport), the army and school. The aim of psychotechnicians in all these fields comprises job placement, rationalised impact on people (vocational training, agitation and propaganda, in particular, influencing people by posters, books, etc.), rationalisation of labour, including research into production fatigue, rationalisation of labour motions and implements of labour, determination of work loads, and other similar tasks."

From May 29 to June 3, 1927, the First All-Union Conference on Psychophysiology of Labour and Vocational Selection took place in Moscow. It demonstrated the substantial

[1] Psychology of mass-cultural and political-educational work and in particular bibliopsychology were close to these branches of psychology.

consolidation of scientific forces in the sphere of psychological and psychophysiological study of labour.

At the First All-Russia Pedological Congress held in Moscow from December 27, 1927 to January 4, 1928, psychotechnicians predominantly dealt with the general principles of conducting and controlling tests, their prognostical importance in connection with the exercise factor, and with questions linked to statistical processing of materials provided by such studies. Studies on vocational orientation and advice in choosing a trade were also reported to the Congress. The Congress's resolution noted the importance of these questions in respect to industrialisation of the country.

On October 10-14, 1927, the Fourth International Conference on Psychotechniques and Vocational Orientation took place in Paris. It was the first international conference in which Soviet experts in psychology of labour participated. The Soviet delegation made several reports, the most important being those of Gellerstein on experiments in exercise studying, Spielrein on the main problems of professiography, Mandryka on the problem of the absolute zero and construction of normal scales of identical complexity in tests, Levitov on vocational selection in Moscow vocational schools and Syrkin on the importance of the social factor and intelligence studies. Rossolimo and Spielrein, representing the USSR, became members of the International Bureau Psychotechnical Congresses. The Soviet delegates visited major centres on psychotechniques in Paris and Bordeaux and studied available information on psychology of labour in other countries. They became convinced that in the number of psychotechnical institutions, material equipment and trained experts the USSR was second only to Germany.

Soviet scholars also took part in the work of the Fifth International Psychotechnical Conference in Utrecht (September 10-14, 1928), where Syrkin delivered one of the main plenary reports. The Soviet delegation included Gellerstein, Kolodnaya, Levitov, Rubinstein, Frolov and Spielrein. The authority enjoyed by Soviet psychology of labour, it was noted in

the foreign press, considerably increased following the Utrecht Conference.

Questions involved in psychology of labour were also reflected in the work of the Ninth International Psychological Congress, which took place from September 1 to 7, 1929 in New Haven (USA). Reports were delivered by Spielrein, Gellerstein and other Soviet psychologists.

One of the most representative congresses in the history of Soviet psychology was the First Congress on Investigation of Human Behaviour, convened in Leningrad (January 25-February 1, 1930), at which several reports were made on basic problems of psychotechniques in the period of reconstruction. The psychotechnical section held nine meetings (one of them devoted to military psychotechniques) and heard 30 reports. General attention was drawn to reports by Gellerstein on the problems of exercise and fatigue. Attention was also paid to Rubinstein's report on the differential research into higher and lower functions. Reports by other Soviet psychologists also enjoyed success.

On April 23-27, 1930, the Sixth International Conference on Psychotechniques took place in Barcelona. The Soviet Union was represented by Spielrein and Syrkin. The next, the Seventh International Conference, by the decision of the delegates was to take place in Moscow. This revealed that Soviet psychological science had won still greater respect since the previous Utrecht Conference. The Committee of Scholars of the Central Executive Committee of the USSR chaired by Lunacharsky, studied and approved documents on the work of the Soviet delegation at the Sixth International Conference on Psychotechniques. It greeted the election of Spielrein to the post of chairman of the International Association of Conferences on Psychotechnics and the announcement that the next International Congress was to be convened in the Soviet Union. The USSR CEC Presidium also approved the establishment of a committee that would help in organising the conference.

From 20 to 25 May, 1931, the All-Union Psychotechnical

Congress was held in Leningrad, at which more than 80 reports were presented on diverse problems of psychology of labour.

The Seventh International Psychotechnical Conference took place in Moscow on September 8-13, 1931 under the chairmanship of Spielrein, at which 100 foreign and 160 Soviet delegates and 800 guests were present. They heard plenary reports on three major topics: "The Theory of Psychotechniques" (reporters William Stern, Gianpaolo Lai, Spielrein); "Application of Mathematical Indicators in Psychotechniques" (reporters Walter Bingham, Blumenfeld, Mandryka, Henri Piéron, Alfred Fessard); "Psychology of the Trade" (reporters Baumgarten, Gellerstein, Walter Lippmann, Harlan Mills, Mira, and Gerhard Rupp). Eighty reports were also delivered at section meetings.

The position of the Soviet delegation at the Seventh Conference can be characterised as a well-grounded opposition to the non-Marxist psychotechnical science. The fact that the level of psychological research in the Soviet Union had considerably risen lent validity to the proposals of Soviet scientists that psychotechniques be based particularly on dialectical materialism. At this conference two views were for the first time clearly contraposed: the Soviet, which insisted on the class character of science, and the bourgeois, which alleged that science is non-class and non-party. Some outstanding Western scholars, for example, Gianpaolo Lai, recognised, in their statements to the conference, certain advantages of the Marxist-Leninist methodology over the idealist and mechanistic theories prevailing in the capitalist countries. This revealed that the process of stratification was taking place within the scientific community of the capitalist countries. It became one of the most serious factors for the development of psychology in the West and moved to the fore a whole galaxy of prominent scholars who based themselves on Marxism (Henri Wallon, Georges Politzer, and others).

The foreign press (in particular, the *Berliner Morgen*) had to report that "the acute theoretical and principled debates

at the plenary sessions, section and commission meetings ended in a victory scored by Soviet psychotechnicians, i.e., by Marxism and its method—dialectical materialism".

Congresses, conferences and meetings on psychotechniques were, no doubt, of great importance. However, they could not provide a clear understanding of the internal mechanisms of its development. To characterise the latter, it is necessary to examine the content and chief principles of psychotechniques at that time and try to trace the paths of evolution of its ideological and theoretical principles.

The formulation of psychotechniques as a specific branch of Soviet psychology took place by 1927-1928. Initially, it advanced the following arguments to substantiate its fundamental opposition to psychology: a constant ideological struggle against all kinds of metaphysical theories is being waged in theoretical psychology (and also in philosophy), but nothing of the kind takes place in psychotechniques. Psychotechniques is only a "technical improvement" and is organically free of methodological conflicts. It occupies a position above all parties and is not related to any class. Like any technical advance, psychotechniques is a weapon that is created by the same method in the Soviet Union and in bourgeois countries. However, the goals it pursues differ depending on the force disposing it. In his Preface to the Russian edition of Erich Stern's book *Applied Psychology* (1924), Spielrein wrote: "Any applied science and, in particular, applied psychology is like rifle which may render a true service both to the Whites and the Reds: the only problem is to master it. Now we are faced with the task of mastering the method and techniques of experimental psychology." This thesis concerning the non-party, neutral nature of psychotechniques resulted in a number of serious errors both in the theory and practice of psychotechniques.

First, this thesis sanctioned in principle a rift between theory and practice. The divergence or general psychological theory, characterised by an ideological and theoretical struggle while allegedly remaining a "pure" theory free of all prac-

tical uses, from applied psychology, or psychotechniques, with the typical absence of conflict between philosophical ideas and the presence of "pure" practice, was legitimised. Both theory and practice, which in reality constitute an indissoluble unity and which cannot exist without one another and are constantly interacting, were deprived of their strength. As a result, psychotechniques displayed contempt for methodological principles (it was not by chance that in 1928 and 1929, there were no general theoretical articles published in the journal *Psikhotekhnika i psikhofiziologia truda*—Psychotechniques and Psychophysiology of Labour) and psychology was treated as a purely formal science.

Second, this thesis "eliminated" distinctions that existed in Soviet and Western psychotechniques and the fundamental contradictions between them. This led to the non-critical assimilation of certain theories current in Western psychotechniques. Thus, Spielrein accepted (up to 1930) a non-critical approach to the personality theory of William Stern, regarding it only as a reaction to Wundt's psychology with its mechanist approach to allegedly unchanging individuals; it impressed him because of its attention to questions involved in the differentiation of personalities. A few correct observations by Stern obscured for Spielrein the teleological nature of personalism.

The theses of psychotechniques mentioned above actually were approved of and shared by the leadership of Soviet psychology, who failed to correctly assess the allegations that psychotechniques was non-party and philosophically neutral, or overcome the rift between psychological science and practice prior to the debate of 1931-1932. This can be explained by the absence of a solid methodological base for psychology as a whole. During discussions that constantly flared up between various trends of psychology (reflexology, reactology, empirical psychology, etc.), each sought to rely on psychotechnical practice and win it over to its side, not bothering itself about the latter's theoretical principles.

By late 1930, and especially during 1931-1932, the situation began to change.

The movement for a critical review of the erroneous models typical of psychotechniques, which reflected the general reconstruction of psychological science, gained impetus between the behavioural congress (January 1930) and the Seventh International Psychotechnical Conference (September 1931). The causes behind the turn in psychotechniques were inherent in the trend itself—a rising level of Marxist knowledge, realisation of the tasks to complete the building of the foundation for socialist economy during the third and decisive year of the five-year plan, and the reactological discussion.

Some new tendencies showing that the methodological "neutrality" of psychotechniques was nearing its end, could be already noted in the report "Elements of Psychotechnical Theory" delivered by Spielrein to the Sixth International Conference on Psychotechniques in Barcelona (April 1930). He stated that differential analysis underlying psychotechniques could not do without a system of knowledge of human society offered by "the doctrine of Karl Marx based on the principles of dialectical materialism".

The most important conclusion that practically stemmed from the new social requirements, consisted in shifting the stress in psychotechnology from vocational selection to problems of training cadres of workers in the setting of rapidly changing production tasks. Leading figures in the psychotechnical movement began to voice the opinion that psychotechniques had increasingly lost its significance as a science on vocational selection, that it had become more dynamic not only in production but also at school, that it was turning into a science of the dynamics of mastering a trade rather than of the selection of more or less suitable persons for a particular trade, while vocational selection outside vocational training was becoming an anachronism. In spite of the fact that 1930 and 1931 witnessed a peak in psychotechnical testing for vocational fitness (about one million persons were tested in 1931), it was precisely at that time that psychologists began to realise that in the period of reconstruction, psychotechniques should be applied to preparing the masses for fulfilling

political and economic tasks rather than to conducting vocational selection. This prevalent goal of psychotechniques was described as the rationalisation of methods used in vocational training, elaboration of appropriate methods for teaching peasants how to use modern technical equipment and for changing their outlook so that they could engage in agriculture based on entirely new principles. It should focus on the practical needs of labour education in schools, in particular, as concerns training the students for production, direct its attention to the improvement of agitation and propaganda.

A certain caution in respect to vocational selection and shunting of this problem to the background in Soviet psychotechniques (there was the view that vocational selection should be completely replaced by vocational orientation) can be explained by the growing dissatisfaction and doubts as to the reliability of the applied methods, and first of all, of intelligence tests. It was noted, for example, that demands on giftedness and preparation were confused in these tests, and no consideration was given to the knowledge the testee already possessed and what he can learn. The reasons for this state of affairs were clarified in a sharp and self-critical article by Spielrein, "On the Turn in Psychotechniques". Intelligence tests were widely criticised in psychotechnical literature, while no new methods that could essentially improve the practice of testing were proposed. One of the reasons was that there was no clear interpretation of the phenomenon of talent or giftedness itself—a problem that was central among those tackled by the method of testing in theoretical and practical terms.

Along with the changing approach to the methods and tasks of psychotechniques, the interpretation of the position psychotechniques adopted in respect to psychological (or psychoneurological, as they were called at that time) sciences was also modified. Spielrein in his article "The Subject-Matter and the Tasks of Psychotechniques" criticised the contraposing of psychologists, widely spread in the past, as "methodologists" to psychotechnicians who allegedly were only "prac-

ticians". He thought that "the border-line between psychotechniques and psychology was being erased" and that at that time "there were hardly any psychologists to be found, who did not engage in psychotechnical work". He emphasised the fact that drawing a line between psychology and psychotechniques was unjustified and artificial, thus taking the first step to the methodological unification of general and applied psychology on the basis of a correct interpretation of the unity of theory and practice.

The year 1931, during which sharp debates took place on psychological problems, witnessed a number of self-critical statements by prominent adherents of psychotechniques, in which serious shortcomings were brought to light both in the theory and practice of this science. In the theses of Spielrein's report to the Society of Materialist Psychoneurologists, entitled "The Situation at the Psychotechnical Front" (February 1931), we find a thorough-going critique of errors committed by the leadership of psychotechniques in the recent past. Spielrein continued to reveal mistakes he committed in his articles "On the Turn in Psychotechniques" and in his report "To the Question of the Theory of Psychotechniques" delivered at the Seventh International Conference on Psychotechniques. Similar critical statements can also be found in articles by other psychotechnicians.

In these articles and reports we can already find the interpretation of psychotechniques as one of the "branches of psychology", of "greatest practical importance". This, it was stressed, does not exclude but rather presupposes a "theoretical substantiation of psychotechnical activity". They also revealed a clear understanding of the substance of psychotechnical practice in the capitalist countries and stated that only technical methods may be borrowed from the West, and even these should be revised before being used under Soviet conditions. The authors of these articles and reports pointed out that in intelligence tests the so-called objective methods were applied to ensure the class principle in promoting representatives of the bourgeoisie to command posts. They stressed that along-

side the study and use of works by the founders of Marxism-Leninism, it was necessary to criticise theoreticians of bourgeois psychotechniques.

In the late 1920s, criticism in Soviet psychotechniques and psychology of labour was largely directed against various mechanistic conceptions of identifying labour and a job, the conception of man as a living machine and the corresponding methods of research, for example, into fatigue. It was also aimed against operating with mathematical quantities without previously analysing the material in qualitative terms, reflexological errors in military psychotechniques, that is, reducing the activity of soldiers to just two reflexes—the "defensive" and the "offensive". During theoretical debates, the struggle against empiricism and idealism was also sharpened. Spielrein, for one, speaking of his own recent infatuation with William Stern, referred to it as a "system of idealist mistakes" (see his report at the First All-Union Congress of the Psychotechnical Society). Vastly significant for the theoretical clarification of problems facing Soviet psychology of labour and general psychology, was the publication in the journal *Sovietskaya psikhotekhnika* (Soviet Psychotechniques) of Gellerstein's article "On Psychology of Labour in the Works of Karl Marx" and, in particular, of Rubinstein's article "Problems of Psychology in the Works by Karl Marx". The importance of the latter article for the development of Soviet psychology cannot be overestimated.

Lenin wrote: "Frankly acknowledging a mistake, ascertaining the reasons for it, analysing the conditions that have led to it, and thrashing out the means of its rectification—that is the hallmark of a serious party; that is how it should perform its duties, and how it should educate and train its *class*. . ."[1] This statement by Lenin provided a good basis for self-criticism among workers in scientific and practical psychotechniques, and this was very important because of a new

[1] V. I. Lenin, "'Left-Wing' Communism—an Infantile Disorder", *Collected Works*, Vol. 31, 1966, p. 57.

stage in the advance in the direction of socialism. Soviet psychologists and psychotechnicians were not satisfied with just exposing serious shortcomings in their activities. They mapped out a plan for the further development of psychology's applied branches and began to implement it.

That was a plan for the further Marxist-Leninist reconstruction of psychology of labour and psychotechniques. Its general outline was given in Gellerstein's article. "Problems of Psychotechniques on the Threshold of the Second Five-Year Plan Period", as well as in articles by A. I. Rosenblud, "On the Tasks and Roads of the Psychotechnical Rationalisation of Trades", by Vladimir Kogan, "Some Tasks of Psychotechniques in Technological Norms", and others. The leitmotif of that plan was realisation of the need to drastically reorganise Soviet psychotechniques, clear the way for creating a socialist psychology of labour by overcoming traditions typical of the capitalist countries and to do the utmost to approach practical economic tasks. It was realised that these tasks were not set for ever, but for the given stage of socialist construction and its prospects for a few years ahead. It was also recognised that they should include both traditional problems of applied psychology and some new problems of socialist psychotechniques.

Vocational selection and vocational orientation, the problem of fatigue and work capacity, of occupational traumatism and accident rate, as well as psychotechniques of "influential activity" were listed among the traditional problems of psychotechniques. The place of each of these problems in the general plan of activities was determined by a number of methodological, economic and technological considerations, and by the history of a given problem in bourgeois and Soviet psychotechniques.

Vocational selection and vocational orientation. Traditionally, they were distinguished on the basis of the following features: vocational selection is choosing suitable people for a given trade, while vocational orientation is choosing suitable trades for a given person. After the discussions of 1930-

1931, many workers in the sphere of psychology and scientific organisation of labour began to doubt the need for vocational selection as such. They proposed that vocational selection be replaced by vocational orientation as a more objective form of orientation, stemming from the trade itself rather than the person. Gellerstein proposed that all the diverse forms of the work involved in vocational placement (both selection and orientation) should be modified to be more in accord with the tasks involved in socialist construction at the given stage. He emphasised that to resolve this problem it was necessary to study modification trends in the forms of vocational labour connected with the socialist forms of labour, updating of technology and equipment, and the overall polytechnisation of students and adult workers. He came to the conclusion that both vocational selection and vocational orientation could render considerable assistance in resolving the problem of the cadres if they were well organised (all measures of personnel placement should be tied in with general measures for personnel training, etc.). Cellerstein was right in objecting to those who were prepared to nihilistically reject a very important and relevant problem for that time—the problem of vocational orientation—or mechanically replace vocational selection by vocational orientation. At the same time, it was impossible not to realise that the centre of gravity in the final account lay in the methods of vocational selection and in determining whether they were adequate to the tasks of differentiated psychological analysis. This decisive aspect of the problem still had to be elaborated both in theoretical and practical terms. During the first half of the 1930s, the psychological and psychotechnical press devoted much space to heated debates on identifying gifted persons by testing. Though their authenticity and effectiveness were seriously questioned, the testological practice nevertheless remained the firm base of vocational selection.

Occupational traumatism and accident rate. This problem became particularly acute in connection with the debates around Karl Marbe's theory on the fatal predisposition of cer-

tain individuals to accidents (the so-called accident-prone personality). In the course of the debates, Soviet psychotechnicians passed from the non-critical assimilation of Marbe's theory to its refutation, because they came to understand that it had emerged on the basis of the biologistic trend in interpreting social phenomena characteristic of the entire psychological community in capitalist countries, and therefore bore that imprint.

As a side effect, criticism of Marbe's theory caused general distrust of the role of the "personality factor" in the accident rate and traumatism. At times, psychologists practically rejected the very concept of "accident". However, investigation of the "personality factor" remained a topic in psychotechniques. Gellerstein justifiably emphasised that as long as accidents occur due to an individual's personal qualities and his unpreparedness for emergencies, due to his low level of knowledge and inadequate qualification, psychotechnicians should not lay down their arms. On the contrary, they should multiply their efforts and, overcoming their former mistakes, actively join in the struggle against occupational traumatism and accidents. He indicated three sectors for their activity: 1) the rationalisation of personnel training; 2) a rationally-organised job-placement; and 3) propaganda of safety measures.

As for the "*influential activity*", in this area a trend for considerably restricting the sphere of psychotechniques application appeared. The fields in which psychotechniques could exert a really beneficial influence were clearly delineated: safety of labour, the struggle to raise labour productivity, traffic control, technological propaganda, the construction and equipment of production buildings, etc. Work in the sphere of "influential psychotechniques" stimulated research into the visual aids for psychological influence and thus also interest in problems of perception.

Psychology of labour had to approach both the traditional psychotechnical problems from a new angle, and the entirely new tasks advanced by the current stage of socialist construc-

tion. Gellerstein briefly characterised these issues in his article on the problems facing psychotechniques: developing polytechnical thinking, formation of habits, rationalisation of instruction methods, establishment of the principles applied in staffing study groups, investigation of the intrinsic laws of exercise, etc. Speaking of new tasks facing psychotechniques in vocational training and stressing the role psychotechniques can play in reconstructing trades, Gellerstein mentioned one important problem, very promising in the rationalisation of socialist technology—that of interaction between man and machine.

The problem, Gellerstein emphasised, was as yet at the initial stage and there were no experimental data that could testify to any successful development of psychotechniques in this area. However, he insisted that the problem of interaction between man and machine was not only of interest for the history of technology but also a rich source of reconstructive ideas formulated both in technical sciences and in those of man. The leading role in the elaboration of this problem was assigned to technical thought governed by economic and political tasks involved in socialist construction. Still, psychotechnicians also had a say in fulfilling that task. If they organised work in this field efficiently, psychotechnicians who disposed of sufficient knowledge, based on Marxism, of the history of technology and the principles governing modern production, could render assistance to planning workers and machine designers by suggesting certain psychophysiological criteria in machine-building. In this sense, a machine, an implement of labour as a whole, could be viewed as an object of psychological analysis. Thus, the task facing psychology of labour, which as a rule dealt with the problem of implements of labour in the narrow and even purely descriptive terms, also included the investigation of those changes that occurred in human activities under the impact of technological changes. Relying on this kind of research, "occupational" psychology could take an active part in modifying trades not only from the angle of the division of labour or improving the organisa-

tion of the work-place, but also from that of establishing technological principles of professional labour.

We can conclude from the above that in the early 1930s, Soviet psychotechniques and psychophysiology of labour were about to undergo a serious reconstruction. Actually, such reconstruction was already underway in many departments of psychology, and as a whole psychotechnicians saw the future development and chief problems of their discipline in a true light: development and perfection of labour skills and habits, mastering the trade and developing an ability to modify the already formed skills and habits, the problem of spatial notions required in certain trades and training for colour perception, attention and observation, improving the system of labour training and mastering trade skills, a psychological study of machine-tools, levers, signalling apparatus and labour tools in the broad meaning of the word. Analysis of problems involved in psychology of labour and their concrete scientific decisions show that in the second half of the 1920s and the first half of the 1930s, Soviet psychotechnicians made a weighty contribution to socialist reconstruction. That contribution could have been still greater, were it not for the fact that, in the mid-1930s, almost all lines of development of these problems were cut short: investigations were stopped into problems involved in vocational selection, production training, occupational traumatism and accidents, rationalisation of the regime of labour, modification of labour implements and tools, etc.

A history of psychology cannot but dwell on the circumstances which led to the long-term freezing of problems involved in psychology of labour and removal from circulation of the very word of "psychotechniques".

Criticism of psychotechniques in the USSR proceeded in two stages. In the early 1930s, there was a critical revision of all, or almost all, problems that were raised by bourgeois psychology and uncritically adopted by Soviet psychologists in the 1920s, first of all principles of psychotechniques devised in the West with its alleged class neutrality and objectivism. This

was part of psychology's reconstruction on the basis of Marxism-Leninism. This criticism presupposed a series of positive solutions, comprising the basis on which Soviet psychologists of labour started work on practical and theoretical reconstruction in order to meet the primary needs of Soviet economy at that time.

The second stage coincided with the growing role of the Stalin personality cult—the latter half of the 1930s. The arrest of Spielrein in 1934, who was editor of *Sovietskaya psikhotekhnika* (Soviet Psychotechniques) and chairman of the All-Union Society of Psychotechniques and Applied Psychophysiology, had much to do with the demise of this discipline. Soon after his arrest, the journal ceased publication and the Society, which was its sponsor, was dissolved. Lecturing on psychotechniques in higher institutions was stopped. With the launching of a critical campaign against pedology, the attitude to psychotechniques even worsened: while regarding psychotechniques as a discipline close to pedology (in particular in using tests), the critics practically rejected all positive advances made by the psychotechnical movement, going as far as negating all problems involved in the psychology of labour. In 1936, all laboratories engaged in occupational psychotechniques and psychophysiology of labour were closed, and research into the growing role of labour combined with theoretical knowledge was terminated. After the arrest of A. K. Gastev[1] the activity of the Central Institute of Labour, as well as of local institutes of labour was also considerably reduced.

In examining criticism meted out against psychotechniques in 1936-1937, one can easily see that, leaving aside the issue of intelligence tests applied in vocational selection, the accusations were made concerning those errors which had been overcome. At least they were fully realised by Soviet psychotechnicians.

Indeed, to portray Soviet psychotechniques as allegedly sticking to idealist positions, defending a non-class, non-party

[1] A. K. Gastev and I. N. Spielrein were both honest Communists, and they were fully exonerated posthumously.

science "trailing behind bourgeois science, etc.", was only possible by ignoring the criticism and self-criticism on the part of psychologists which was widespread in the initial period of the Marxist-Leninist turn in psychology. Such a situation became possible because of the personality cult and the overall violation of the Leninist norms in politics and science. No genuinely historical approach to psychotechniques was displayed at that stage, since Lenin's advice on carefully preserving all the advances in science, to which undoubtedly the system of a scientific organisation of labour belonged (and psychotechniques was one part of it), was cast into oblivion. All these circumstances in the final account dealt a crucial blow to the entire socialist construction. Criticism of psychotechniques in 1936-1937 was dogmatic, and largely devoid of a positive, creative content organically inherent in Marxist criticism and self-criticism, about which Lenin spoke repeatedly.

The rejection of not only erroneous tendencies in psychotechniques but even its fundamental achievements, caused considerable damage to Soviet psychology as a whole. It is quite clear that the concept of a non-class, non-party and methodologically neutral psychotechniques which was attacked by Marxist psychologists in 1931-1932 and which was successfully overcome as a result, was a serious mistake. Nevertheless, to conceive of the Soviet psychotechniques of the mid-1930s as a "pseudo-science", was biased and incorrect. The re-establishment of Leninist norms in the USSR once again placed elaboration of labour problems, stimulation and development of engineering psychology and space psychology on the agenda of Soviet psychology. The problems of polytechnical education, raising work capacity and development of creative thinking and initiative were consequently moved to the foreground.

At present, the problem involving the human factor has become a central one, on which the restructuring of all aspects of Soviet society hinges. This inevitably raises interest in problems tackled by psychology of labour and ergonomics, whose origins can easily be traced to their precursor—psychotechniques.

Chapter Ten

DEVELOPMENT OF SOCIAL PSYCHOLOGY IN THE 1920s

Interest in social psychology grew even in the first few years after the victory of the Great October Socialist Revolution. It followed in the wake of large-scale social transformations which were reflected in people's psychology and produced considerable shifts in it. Developing scientific thought could not be satisfied with just studying the properties of the human soul while almost completely ignoring how that soul manifested itself in real life. Psychologists were interested in a living, concrete, historical man. Many were no longer satisfied with examining man in general—an abstract being existing outside of time and space.

It would seem that this interest could be met by a special scientific discipline, which at that time did not yet bear the name of social psychology, though actually that is what it was. It acquired its chief characteristic features in the works of Wilhelm Wundt, Gabriel Tarde, William McDougall, Emile Durkheim, Lucien Lévy-Bruhl and Sigmund Freud abroad, and in those of Russian psychologists Pyotr Lavrov, Nikolai Mikhailovsky, Lev Petrazhitsky, Yevgeny Roberti and Dmitry Ovsyaniko-Kulikovsky. However, it was impossible to directly elaborate these socio-psychological theories by these authors in Russia following the October Revolution because of the outright insolvency of the scientific schools they represented and the vagueness of their philosophical principles.

This accounted for the fact that in the first few years after the revolution, objective psychology and mainly reflexology in its diverse modifications, came to the fore and assumed the

leading role in the science of man. Social psychology came under the same impact. Bekhterev published his *Collective Reflexology* in which he tried to reduce laws governing the masses to the basic laws of physics (the law of inertia, the law of action and reaction, etc.). In one of his articles written in the same vein as *Collective Reflexology*, Bekhterev sided with Tarde and McDougall in formulating the law of rhythm, or of periodic motion. He readily passed from the forms of periodic motion examined in physics (Brownian motion, the Earth's revolution round the Sun and its axis, or pendulum motion) to socio-psychological facts such as the vacillation of the soldier's fighting spirit in warfare. As he erased the fundamental difference between living and dead nature and universally applied the existing biological and physical laws and even invented new ones, Bekhterev formulated a great many principles (of changeability, inertia, differentiation, cohesion, reproduction, selection), which allegedly governed the development of both the personality and society.

Bekhterev's laws of collective reflexology were manifestly close to Alexander Bogdanov's tectological laws, yet it would be a mistake to identify Bogdanov's philosophy and Bekhterev's methods. Bekhterev evolved from subjective idealist psychology to reflexology, while Machist and empiric Bogdanov, from spontaneous materialism to a philosophical revision of Marxism. After the October Revolution, Bogdanov tried to camouflage his revisionist intentions by proposing "leftist" mechanistic theses, as well as making references to reflexology. Despite all the difference, Bekhterev's "collective reflexology" was consonant with Bogdanov's sociological propositions in the 1920s.

Bekhterev saw man essentially as a physiological being, and society as a simple physiological machine; as a result he failed to establish any actual social laws.

Even as applied to an individual personality, a reflexological approach was an abstraction, because reflexology did not take into account all aspects of man's behaviour but represented him as a primitive mechanical aggregate. The view of

society as an aggregate of physiological energy machines, typical of reflexologists, was still more nonsensical. Marxist criticism of the methodological prerequisites of reflexology relied on the propositions which Lenin formulated in his *Materialism and Empirio-Criticism*. "Can one imagine," he wrote, "anything more sterile, lifeless and scholastic than this string of biological and energeticist terms that contribute nothing, and can contribute nothing, in the sphere of social sciences?"[1] "In fact," he continued, "an enquiry into social phenomena and an elucidation of the *method* of the social sciences *cannot* be undertaken with the aid of these concepts. Nothing is easier than to tack an 'energeticist' or 'biologico-sociological' label on to such phenomena as crises, revolutions, the class struggle and so forth; but neither is there anything more sterile, more scholastic and lifeless than such an occupation."[2]

Philosophers and psychologists basing themselves on Marxist positions realised that "collective reflexology", "physiology of the spirit" and other similar biologico-sociological doctrines were nothing but an attempt to translate the psychological school of sociology into the language of reflexes (Gabriel Tarde, Gustave Le Bon, Emile Durkheim et al.). In the final account, it was an idealist trend. Its critics were right in concluding that mechanical materialism, which served as a philosophical base for all forms of reflexology, could never rise to a scientific view of society and individual. Idealism in the interpretation of history was seen as an organic and intrinsic vice of mechanical materialism. The very possibility of a logical criticism of reflexology methods applied in social psychology depended on its proceeding from the Leninist thesis concerning the unscientific nature of transferring biological concepts into the sphere of social sciences. That should be stressed again and again.

Lenin's criticism of Bogdanov's activity, which was not any new research conducted on Marxist principles, but amounted

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[1] V. I. Lenin, *Collected Works*, Vol. 14, p. 327.

[2] *Ibid.*, p. 328.

to applying biological and energeticist terminology to the formerly obtained results of investigations, served as a platform for criticising diverse socio-psychological theories united by the common name of reflexology.

Another statement by Lenin, which he formulated as he commented on Marx's letter to Ludwig Kugelmann concerning Friedrich Lange's views, was of immense significance: "The basis of Marx's criticism of Lange is not that Lange foists Malthusianism in particular upon sociology, but that the transfer of biological concepts *in general* to the sphere of the social sciences is *phrase-mongering*."[1] This Marxist thesis was taken up by those who fought against the mechanical and idealist theories in social psychology.

The so-called psychoneurological view of society (of class struggle, revolution, intellectuals, youth, party-building), which was developed by Zalkind in a series of articles he later published in a book *Outlines of the Culture of the Revolutionary Times*, was close to the reflexology variety of social psychology. His socio-psychological views, in fact, constituted an odd concoction of vulgar biologism, Freudianism and ultra-revolutionary phraseology.

Yet another interpretation of social psychology was the system of views characteristic of M. Reisner. He was not a psychologist by education, and came to it after engaging in jurisprudence, sociology and administrative law. Before the revolution, he sided with Petrazhitsky's psychological theory of law. As he compared the latter's views with those of Feuerbach's little-known follower L. Knapp, Reisner came to the conclusion of the possibility to combine the psychological theory of law as an emotional phenomenon with the materialist interpretation of the origin and class content of legal norms. Reisner attempted to combine Petrazhitsky's and Knapp's views with Marx's theory of historical materialism and Freud's psychoanalysis. On this foundation he based his doctrine of "mass

[1] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Vol. 14, p. 329.

psychology". In 1923, he made a report, "Problems of Psychology and the Theory of Historical Materialism". In the debate that followed, it was rightly noted that the reporter unjustifiably ascribed to Marx the view which regarded passions and mental powers as the motive forces of social development, and psychological motivation as a mighty stimulus of social progress. In this connection, those who took part in the debate questioned Reisner's views on "suggestions", various "sexual impulses" and "erotic ecstasy" as factors determining and directing social life. It became clear that the general socio-psychological conception of Reisner was an attempt to introduce psychologism into historical materialism, thus producing a "psychical Marxism", i.e. yet another variety of an erroneous psychological trend in sociology.

However, in the works of Reisner, as in those by many other Soviet philosophers and psychologists of that time, the correct tendency of drawing upon the heritage of the classics of Marxism-Leninism to elaborate concrete socio-psychological problems was already revealed.

From the viewpoint of historical materialism, the production process is a social process, and the individual producer is a socially-determined person. That is why Engels in his "The Part Played by Labour in the Transition from Ape to Man", indicating the transitional steps on the path from animal to man, noted that speech, language played a tremendous role.

Reisner emphasised the need to work on the problems involved in the psychology of speech as one of the means of communication. He also stressed, relying on Marxist theory and the works of Sechenov and Pavlov, the necessity to intensively develop psychology of labour and raised the question of whether psychotechniques could be scientifically substantiated as the most expedient organisation of labour's psychic aspect. In the same report, Reisner confronted psychologists and sociologists with the task of discovering, on the basis of the theory of Marx and Engels, the types of class and group psychology that developed on the basis of a certain level of the productive forces and the forms of industrial labour.

Neither Reisner nor his colleagues had any real means at their disposal to fulfil these tasks, which, speaking generally, were formulated correctly. The methods suggested by Reisner for dealing with problems of social psychology, which were as a rule borrowed from the armoury of reflexology, reactology, Freudian psychoanalysis and speculative bourgeois sociology, proved to be absolutely inadequate for the nature and content of the set aims. They could only lead the young branch of psychological science to an impasse. It is not by chance that the most brilliant pages in Reisner's book, *Problems of Social Psychology*, which in the author's view should mark a step towards the creation of a social psychology that would be based on the principles of Marxism, are devoted to critical evaluation of Freud's doctrine.

Close to Reisner's theory was "collective psychology", formulated at the same time by L. N. Voitolovsky. Like Reisner, he tried to create a social psychology that would be based on the principles of the Marxist outlook. Voitolovsky regarded social production and the productive forces to be the primary factor behind social phenomena. He regarded mental and ideological factors as secondary in relation to them.

Studies of the nature and importance of a collectivist approach to social development had to present, in Voitolovsky's view, one of the chief tasks to be tackled by contemporary social psychology, and Marxist research should be continued precisely in this direction. In the introductory chapter of his book, *Outlines of Collective Psychology*, Voitolovsky in the main adhered, though not always, to a Marxist viewpoint. As he turned to the concrete problems involved in social psychology ("What Is the Mob?", "The Mob and Personality", "The Emotional Nature of the Mob", "The Laws of Mass Actions"), however, he returned to the positions of traditional bourgeois subjectivism in the spirit of Gustave Le Bon and Nikolai Mikhailovsky. This is particularly clear from his epigraph to the chapter "What Is the Mob?' which he borrowed from Lester Ward and which states that phenomena of subjective psychology, in particular emotions taken in their totality,

represent the dynamic element of society, or the social forces. As the result of such an approach, the *Outlines of Collective Psychology* which are quite interesting as regards psychological material (especially observations on certain events and phenomena in the Civil War), did not part from the socio-psychological writings typical of the subjective empirical school.

On the whole, we must acclaim the genuine efforts by Zalkind, Reisner and Voitolovsky to actively participate in revolutionary creativity and to make their own contribution to the development of psychological science, even though they failed to realise their propositions of social psychology. This should be done despite the inadequacy of the first attempts at creating Marxist foundations for psychology.

From this one can draw the following conclusions: the attempt to create a Marxist social psychology in the 1920s failed primarily because wordy declarations were substituted for the elaboration of scientific problems. Moreover, scholars engaged in social psychology were not sufficiently familiar with Marxism-Leninism to be able to eliminate its eclectic combination with reflexology, psychopathology, Freudianism and subjective sociological empiricism. The methods they applied in socio-psychological research proved to be inadequate for the tasks they had to tackle. The aims of social psychology, of course, promoted the mastering of Marxism-Leninism and its application in analysis of the socio-psychological phenomena in the revolutionary period. However, towards the end of the 1920s, interest in social psychology noticeably abated, because of the sharp criticism of the socio-psychological propositions, particularly as a result of the inability of reflexologists to explain in scientific terms social and collective behaviour, which had then become clear.

However, the reasons for the stagnation of social psychology are not to be reduced to this alone. Two important factors should be stressed which played a significant role in that situation.

One of the most important characteristics of the development of general psychology after the October Revolution was

that the scientists engaged in it realised its opposition to old, emphatically individualistic psychology. They were perfectly aware of the fact that new psychology should be social—and this idea was present in all manuals on psychology, beginning with Bekhterev's *General Foundations of Human Reflexology* (1918) and ending with Kornilov's *Text-Book on Psychology...* (1927).

But if one assumes that psychology is a social science, then do we need a special branch, social psychology? This question seemed to be a legitimate one to many scholars. Besides, in the 1920s, social psychology was monopolised by reflexologists, who mechanically rejected not only the distinctions between a human personality and a biological organism, but also between man and society. At the same time, under the banner of reflexology, they united all sciences dealing with nature, man and society. Dissenting with the view of the majority of psychologists, Georgi Chelpanov, a prominent representative of pre-revolutionary empirical psychology who in early 1920s was director of the Moscow Psychological Institute, was determined to create a "Marxist social psychology". Chelpanov was an active opponent of dialectical materialism, and his tactic was aimed at shifting attention to social psychology to avoid modifications imminent in empirical psychology if it were restructured along Marxist principles. Chelpanov's ploy met with opposition on the part of progressive psychologists. As a result, the public's interest in social psychology as an independent branch of science declined.

There was yet another circumstance which obstructed the development of social psychology—the fear that social psychology tended to substitute for historical materialism in investigating historical events and in trying to explain all social phenomena in psychological terms. There were grounds for such apprehensions, because many psychologists, even in criticising the psychological trend in sociology, often slipped into subjectivism. It would be wrong, however, to assert that this tendency was immanent in social psychology as a science. It was rather the product of concrete historical circumstances. Many

psychological problems at that time were correctly treated as belonging to social psychology (e.g., the psychological climate of a collective, forms of collective behaviour, psychological characteristics of class solidarity, enmity, hatred, heroism).

Actually, social psychology, while not substituting for historical materialism, may become its true assistant and elaborate a system of psychological laws that govern men's social behaviour in a collective. This view was shared by many Soviet scholars who were engaged in research into the theoretical foundations of social psychology.

The theory of the collective elaborated by Anton Makarenko became an essential prerequisite for the work of Soviet psychologists in social psychology.

The change in the content of socio-psychological studies called for the modification of methods applied in such investigations.

An important circumstance in the development of social psychology (and the related science of sociology) was that in the initial period of its evolution (up to the late 1950s) it had practically no experimental base at its disposal. Despite the fact that Makarenko's work and pedagogical activity resulted not only in the formulation of principles of a psychological-pedagogic and social-psychological natural experiment, but also in its practical application, psychologists continued to describe and assess socio-psychological phenomena mainly on the basis of observations; thus, they were to a large degree speculative. This state of affairs can be explained by the fact that Soviet philosophical writers proclaimed that experiment cannot be used in cognising social phenomena. It was only as a result of the debates of the late 1950s-early 1960s that psychologists rejected this erroneous view.

Soviet psychologists had to eliminate alien theoretical elements from the traditional socio-psychological concepts and to provide these concepts with adequate methodological interpretations of objective psychological phenomena. It was impossible just to explain in theoretical terms foreign experimental materials and to use the currently circulated scientific

notions and terms. It was necessary to conduct original experimental investigations, based on Marxist-Leninist psychological concepts of personality and the collective, in a number of cases to introduce new scientific concepts and to create, if necessary, original socio-psychological terminology to correspond to these concepts. Only in this way was it possible to criticise bourgeois social psychology from principled and firm positions and to blaze a new path for the development of Soviet social psychology.

Chapter Eleven

DEVELOPMENT OF PATHOPSYCHOLOGY IN THE 1920s

The science of psychology was characterised by profound humanism. This was particularly dispayed in the attention towards a sick person as a human being whose behaviour deviated from normal social behaviour because of an accident, inborn deficiency, difficult life conditions in the past, etc. Pathological psychology (psychopathology, or psychoneuropathology), i.e. a science of disorders and abnormalities in behaviour or mental activity, became one of the more ramified branches of psychology. This science borders on medical and biological sciences (psychiatry, neuropathology, neurology). However, it is also closely linked with general and social psychology, and social disciplines, such as criminology and pedagogics. This accounts for the motley nature of psychopathological works which were lavishy published in the 1920s.

The restructuring of psychology on the principles of Marxism, which seriously affected the general state of other branches of psychology, proceeded very slowly in the sphere of pathopsychology. At that stage, the latter had not yet overcome the traditions of empirical psychology traced back to Emil Kraepelin. Ernst Kretschmer with his theory of constitutions exerted a noticeable influence on the development of pathopsychology (M. O. Gurevich, A. M. Schubert). G. V. Segalin propagated principles very close to the ideas of Cesare Lombroso and Ernst Kretschmer, which he called europathology involved in the problems of psychology of creative activity and explaining development of a person's gifts and talents exclusively by pedagogical efforts. His views were reflected in a

specialised journal, *The Clinical Archives of Geniality and Giftedness.*

The Russian Psychoanalytical Society propagated Freudianism (Ivan Yermakov, M. V. Wulf). Over a number of years, the leading role in pathopsychology was played by reflexology (Victor Osipov, Victor Protopopov).

An important factor in establishing the theoretical foundations of pathopsychology were the materialist traditions typical of Russian psychiatry and psychoneurology, linked with Sechenov, Pavlov, Bekhterev, Tarkhanov, Korsakov and Serbsky. Nevertheless, it was only in the late 1920s that scientific workers in the field of pathopsychology and psychiatry fully realised the need to struggle against idealist and mechanical conceptions. The flood of Marxist criticism (and first of all, of Freudianism and vulgar mechanical reflexology) brushed aside the obstacles to the secret area of studying the "sick soul" and suggested a revision of the very foundations of pathopsychology. A new, critical approach to the entire theoretical pool of pathopsychology emerged at the First Congress on the Behavioural Studies of Man (1929).

Reporters to the congress stated that pathopsychological material could not be stuffed into the framework of biology and thus grew over into sociology. It was pointed out that the complex unity of personality could only be fathomed in considering both its biological and social properties, at the intersection of which it emerges. However, the question of the interrelationship between the biological and the social, as well as solutions to theoretical problems, were beyond the powers of pathopsychology at that stage. For example, Arthur Kronfeld expressed the view that psychiatry involved two fields of knowledge—biology and "the science of the spirit". He tried to resolve psychopathological problems on the basis of Husserlian principles. Another psychologist, V. A. Vnukov, wrote that psychiatrists should either stick in their research to trite and elementary philosophical "truths", or borrow them from the arsenal of contemporary idealist philosophy in its variegated forms.

This position became a reference-point for the philosophical criticism of the principles guiding leading Western psychopathologists in interpreting material obtained through empirical observations by psychiatrists who shared Kraepelin's view.

The psychomorphological trend ("brain pathology") represented by the works of Karl Wernicke and Karl Kleist, was characterised at the congress as brain "mythologism". This clearly reflected its apologists' naively-mechanistic views. Despite certain advances in overcoming psychological empiricism of Emil Kraepelin and Jean-Etienne Esquirol, they still did not move far from Ludwig Buchner and Jacob Moleschott. At the same time, consideration should be given to the unjustified efforts to identify the social and the psychological. This led to vitalism (Eugen Bleuber, Paul Schilder and partly Arthur Kronfeld), to probing into an illness only by the intuitive penetration into a sick person's emotions (Karl Jaspers). It led to recognising the leading role of instinctive life (Sigmund Freud), of the organism's "vegetative" soul and, finally, to the assertion of the primacy of religion. As was noted at the congress, the vitalist trend in contemporary psychopathology is combined and merged with mechanism. This combination of mechanism and idealism revealed that this department of the theory of psychology demanded close attention, since it was, as was noted by one of the congress participants, as yet in a primordial state.

By the end of the 1920s, it had become clear that pathopsychology's general problems could not be successfully resolved either from positions of Kraepelin's empiricism, or his critics from among psychomorphologists. This led to the conclusion that philosophical problems involved in psychopathology should be seriously studied. The awareness of this fact comprised the basis for rebuilding pathopsychology.

It was, of course, difficult and even impossible to draw a line, in a historical essay, between the sphere of pathopsychology and psychiatry, where knowledge of the nature and forms of manifestations of deficient mentality is applied in practice. In the works on the history of psychiatry in the USSR (Tikhon

Yudin, Yuri Kannabikh) we may find characteristics of the activity of the main psychiatric institutions and the principal tasks psychiatry faced in the 1920s. They also reflect the progress achieved by Soviet medicine in the prevention and treatment of mental illnesses. Pathopsychological problems elucidated in these works can be referred both to the history of psychiatry and to that of psychology.

The balance of forces at the junction of psychology, physiology and psychiatry in the latter half of the 1920s can be briefly characterised as follows. In Leningrad, the leading role was played by the schools of Pavlov and Bekhterev. As is well known, in the late 1920s and the early 1930s, Pavlov and his associates directly passed over to the elaboration of problems of pathopsychology. They advanced the idea of two signal systems and the theory of the types of higher nervous activity. Proceeding from these positions, they criticised the views of Pierre Janet, Ernst Kretschmer and others.

Pavlov, who proceeded from the assumption that the cerebral cortex and the subcortex, as well as the two signal systems interact, demonstrated that derangements in the functions of the cortex consist in the dissociation of all the three elements through which the organism correlates itself with the environment: the subcortex, the first signal system and the second signal system. Moreover, he showed that these correlations could change in any direction. Pathological states of mental (cortical) activity are reflected in the decline in the work efficiency of nerve cells, as a result of which their reactivity changes and phase phenomena appear. A pathological state can affect the entire cortex or be localised in a certain section or functional system, where interaction between the cortex and the subcortex undergoes a particularly noticeable change. The probability and the form of a mental illness depend on the type of the nervous system. Those with a fragile nervous system are supersensitive in facing difficulties. If the circumstances are sufficiently grave, this results in schizophrenia. Pavlov was engaged in the analysis of psychotic states in patients at the clinic hospitals headed by Sergei Davidenkov

and Anatoly Ivanov-Smolensky up to his last days. His efforts in this field established an experimental base for studying the complex pattern of diverse mental and nervous diseases. This was described in many of Pavlov's works: "A Physiologist's Attempt at Making a Trip into the Field of Psychiatry" (1930), "An Attempt at a Physiological Understanding of the Symptomatology of Hysteria" (1933), "An Attempt at a Physiological Interpretation of Obsessive Neurosis or Paranoia" (1934), "General Types of Higher Nervous Activity in Animal and in Man" (1935), "Types of Higher Nervous Activity in Connection with Neuroses and Psychoses and the Physiological Mechanism of Neurotic and Psychotic Symptoms" (1935).

Bekhterev and his disciples tried to shift psychiatry to the path of reflexology. At the end of the 1920s, there was a decline in the interest in reflexology, however; physicians began to increasingly question its actual possibilities. They emphasised that the complete elimination of psychology demanded by orthodox reflexologists was an oversimplification. They stressed that reflexology as an individual biological discipline occupied a position which was far removed from the sociohistorical problems faced by human society, from the theory of the brain and clinical neurology. Speaking of the Leningrad psychological schools of that period, we should stress the role played by the physiological school of Nikolai Vvedensky and Alexei Ukhtomsky in the analysis of clinical psychopathological data (in particular, in connection with the theory of the dominant).

In Moscow, the school propagating the ideas of Sergei Korsakov and Alexei Kozhevnikov prevailed. Moscow psychiatrists and psychopathologists achieved tangible successes in clinical research (Vladimir Serbsky, Pyotr Gannushkin, Yuri Kannabikh). In the 1920s, they were seriously influenced by the ideas of Emil Kraepelin and in particular of the hereditary-biological trend in pathological characterology (Sukhanov, Yudin, Gannushkin) and of the psychoanalytical trend (Wulf, Zalkind).

Typical of the pathopsychological investigations launched

after the methodological debates of the early 1930s was the growing influence of the views of Vygotsky, who initiated a number of studies of the semantic and systems organisation of mental activity in development and disintegration. Studying the genesis of higher psychological functions promoted development of one of the most important lines of research in child and pedagogical psychology. At the same time investigations of the disintegration of higher psychological functions and discovering how they were deranged at various stages of their development, made up the content of pathopsychological examination. Vygotsky's views were further elaborated in the works of F. V. Bassin, P. M. Boskis, B. V. Zeigarnik, P. Ye. Levina, A. R. Luria and many other scientists.

The problem of bodily constitution as a principle underlying mental derangements and the foundation of characterology should be set apart among the vitally important problems of pathopsychology which were bordering on general psychology and some of its special branches.

The question of the constitutional foundations of normal and pathological human behaviour constituted an aspect of a wider psychological problem of exogeny and endogeny. Kretschmer's doctrine on the relationship between the bodily constitution and the character became very popular in that period. It exerted a great influence on psychiatrists Gannushkin, Yudin, Gurevich, psychologists Kornilov, Blonsky, and many pedologists. In many of the works, the endogenous factor was overestimated and some psychopathological concepts were often passed for the principles of normal psychology. The role played by the endocrine system, as well as discoveries in the area of the subcortical centres, enjoyed special attention.

Blonsky, for example, emphasised in his *Psychological Essays* that individual distinctions in human behaviour depended on whether the sympathetic and parasympathetic nervous systems were well-balanced and coordinated.

B. M. Zavadovsky (*Essays on Internal Secretion,* 1928), N. A. Belov (*The Physiology of Types*, 1924), and V. N. Speransky (*Internal Secretion and Mental Processes*, 1927, *and*

Hormone-Reflexology as the Foundation of Psychology and Psychiatry, 1923), and many other scientists dealt particularly in their works with how the functioning of each of the endocrine glands (thyroid, parathyroid, sexual and adrenal glands) influences mental activity and what mental illnesses are caused by the hypo- or hyperfunctioning of all these glands. Proceeding from the lowered or heightened activity of individual glands (in their interaction), some of the authors (N. A. Belov, N. Ya. Perna, B. M. Zavadovsky and others) suggested a classification of human behavioural types, characters and temperaments. As Zavadovsky held, joint action of the 414 thyroid and adrenal glands accounts for differences in the temperament: a sanguine person is characterised by a fair activity of both glands; a phlegmatic person—by the weakness of both; a choleric person possesses a weak thyroid but a strong adrenal gland, while a melancholic person is noted for a strong thyroid and a weak adrenal gland. In all these works, the role of the endogenous factor was slightly exaggerated. Still they should be lauded for their thorough experimental and clinical clarification of the significance of the function of each endocrine gland for man's mental state.

The problem of bodily constitution, which was closely related to the question of the influence exerted by the endocrine and vegetative nervous system on mental activity, constituted one of the major issues in general, individual (differential) and pathological psychology in the 1920s and early 1930s. The history of that problem gives us grounds for considering it (and the problem of characterology as well) in the section on pathopsychology: it emerged within the bounds of general pathology. However, in 1924, Gannushkin wrote that "the doctrine on characters should be an object of a discipline which occupies a place at the junction of psychology and psychiatry". In 1929, V. A. Nevsky proclamed the same view in his book, *Elements of Differential Psychology*, stating that "over the recent years, psychiatry introduces a fresh current into characterology". This problem was extensively dealt with both in the USSR and abroad, in particular in all summary-type

works on psychology. Scientific polemics on the question of bodily constitutions touched upon problems which have not lost their relevance up to the present day: first, what is a constitution and which of the factors involved is dominant (bodily structure, tissue texture, brain processes, endocrine specifics, etc.); second, is a constitution a sum-total of the organism's inherited properties, or does it include acquired features (genotype or phenotype); and finally, how do constitutional characteristics change under the impact of the social medium? Depending on the answers to these questions, various classification systems were proposed.

The most popular were the constitutional classification systems formulated by Kretschmer. Viola, Sigo, Blonsky, and Belov. Sigo divided all people into four types: the muscular (in which the muscular system predominates), the respiratory (the respiratory organs prevail), the digestive (with more developed digestive organs) and the cerebral (with the prevalence of the brain). Viola proposed three types of constitution which depended on the length of limbs and the size of internal organs. Blonsky chose the complexion as a criterion, according to which he divided people into two groups: the "soft and raw" and the "dry and firm" types. He noted that the dry type possesses a well-developed attention. They have a certain stability and high intelligence, are independent and cruel. The "raw" type is characterised by affectations, absent-mindedness, and suggestibility. The most successful was the typology suggested by Kretschmer, who linked types of bodily constitution with the "circles of temperament" (see *Körperbau und Charakter*, Berlin, 1921). Kretschmer regarded each of these "temperament circles" as consisting of three variants of a definite type (e.g., schizoid and schizophrenic types), which can pass from one into the other and are distinct only in quantitative terms: sound, psychopathic and psychotic. This typology was dealt with by Kornilov in his textbook of psychology.

In the late 1920s, constitutional typology systems, suggested by Sigo, Kretschmer and others, were largely accepted without due criticism. Many authors presented the matter in

such a way that the problem of interdependence between the bodily constitution and the mental type seemed to be finally resolved (see, for example, M. P. Andreyev, *A Somatological Approach to Studying Personality in Adults and Children*). They thought that the time had arrived when it was possible to pass from the plane of establishing a dependence between bodily constitution and mental type to tackling numerous other questions, such as the dynamics and evolution of certain constitutional types, phylogenetic and ontogenetic interpretation of these types. Kretschmer saw somatological analysis as a methodologically valuable instrument to be used for penetrating the structure of personality. Thus one can see that the merits of these theories (dependence of the normal and pathological mental states of bodily constitution and functions) overshadowed their errors (biological fatalism, ignoring the role played by the social milieu, applying laws of development based on research of mental diseases, i.e., pathological material, to sound people, confusing biological and socio-historical categories). The constitutional-characteristic propositions devised by other authors (Yudin, Blonsky, Epshtein, Bunak, Belov) suffered from the same mistakes. Blonsky, for one, in classifying people into "soft and raw" and "dry and firm" types, relied on the works of the animal-breeder, Bogdanov, i.e., his description of such breeds of horses, swine, cows and sheep. As a result, in Blonsky's system, human "biotypes" were turned into particular cases of general biotypes typical of the animal world. No wonder, then, that the so-called hereditary-biological trend in pathopsychology demonstrated its incompetence in "discovering" links between the features inherent in human personality and mental illnesses.

This period now was marked by the formulation of the theory on the types of higher nervous activity achieved by Pavlov, which subsequently played a great role in the history of physiology, psychology and psychiatry. The initial outlines of Pavlov's typology emerged in 1927 (*Physiological Theory on the Types of the Nervous System and Temperaments*, a report delivered at the meeting of the Russian Surgical Society).

After 1927, Pavlov and his disciples specified the experimental indicators of the types of higher nervous activity and investigated the nature of the nervous system's basic properties (its strength, balance and mobility). They constituted the basis for typology.

It should again be recalled that the hereditary-biological trends assumed endogeny as the determining principle in distinguishing between the temperaments, characters and predispositions (to mental illnesses particularly). However, this principle of the characteristics of people came into a glaring contradiction with the need to consider social influences, and the contention that consciousness was determined by social being, which became increasingly decisive in the interpretation of psychic phenomena. In this period this demand was still met on the principle of the compromising theory of "two factors", according to which endogeny, or the hereditary-biological factor, was recognised together with the exogenic impacts, or the social factor. At times, the primacy of the latter was proclaimed, or a balance between the former and the latter was assumed. This concept, of course, could not produce any tangible results either in general or differential psychology (in particular, in characterology), or in pathopsychology.

Kornilov took the concept of the two factors (the biological and the social) as the basis for devising his typological classification, which he himself called the classification of behavioural types. The concept of the behavioural type included temperament as a totality of inborn properties and character as an aggregate of acquired features. It was based on experimental studies conducted with reactological methods (utilisation of chronoscopical and dynamoscopical data). Paying its due to Kretschmer's typology, Kornilov proceeded in his own typology from distinctions in the nature of human reactions. He maintained that although they were undoubtedly closely connected with differences in the constitutional specifics, this was far from clear in scientific terms. He proposed four types of people in conformity with the quickness and intensity of reactions: the motor-active type, characterised by quick and

strong reactions; the motor-passive type, of which slow and weak reactions were typical; the sensory-active type, featuring slow but profound reactions; and finally, the sensory-passive type, for which slow and weak reactions are usual.

In a detailed description of each of the four types. Kornilov largely based himself on traditional constitutional and psychological characteristics accepted in the hereditary-biological systems of Kretschmer, Sigo and other psychologists rather than on his own experimental data. Here, for example, is his portrayal of a person belonging to the sensory-passive type: "He is of short stature, has a soft wide face, a short neck and is given to plumpness and even obesity. He is slow and listless in movements and is passive to the point of inertia. However, though slow on the uptake, he is capable of going far and for a long time. He is good-natured to the point of sentimentality, true to principles to the point of absurdity. He weighs and considers each little thing so thoroughly that he is always late in making decisions. He possesses a mind which is logically organised, filled with vast knowledge and highly productive, even if not always original, in its creative activity. This type of person is a good practical worker, cabinet scholar, model official, kind-hearted, good-natured, calm humourist and effeminate sybarite." This description is almost a word-for-word replica of the list of properties Kretschmer provided as he characterised the pyknic type.

Kornilov's classification shares all the shortcomings typical of all hereditary-biological systems. The type for him was essentially a biotype, thus the question of social principles underlying typological specifics was not even raised. His reservation on the primacy of the social factor over the biological did not have any impact on the concrete content of his typology, since distinctions in the nature of reactions of the individual "are determined by the biological features of the organism". Kornilov's attempt at realising the idea of the classification of behavioural types exclusively on the social principle, i.e., depending on class affiliation and productive activity (the behavioural type of a bourgeois, intellectual, urban or rural pro-

letarian) likewise failed. His descriptions of certain types of behaviour, for example, that of the bourgeois, are lucid and imaginative, but of no scientific value, being far removed from the psychology he assumed as the basis for temperament and character and existing just parallel with it. In describing behavioural types according to the social principle, psychology was substituted for sociology, and the psychological features of social groups, in turn, were derived from hereditary predilections. Social psychology was thus placed on a biological basis. In general, it should be said that the characteristics of the social types in Kornilov's book are devoid of scientific authenticity because they are interpreted in abstract terms and are considered out of historical context.

The classification of human types suggested by the Russian psychologist and psychiatrist Alexander Lazursky, which met with considerable interest during the 1920s, gave serious consideration to endogenous and exogenous factors. The author of the theory based his typology on "the principle of the individual's active adaptation to the environment", proposing two modes of division: according to the level of mental development—into three successively elevated rungs, and according to the psychic content—into a variety of different types and their modifications. Analysing and comparing the infinitely variegated, both in content and complexity, manifestations of human personality, Lazursky broke them up into endopsychic manifestations (the nervous-psychic organisation, "the core of human personality, its basic foundation") and exopsychic ones, whose content depended on the person's relationships with the environment and external objects. The relationship between the endopsyche and exopsyche at different levels is far from being identical, according to Lazursky, who devised an extremely complicated system of personality typology that took into account all the numerous factors he brought to light, among which both normal mentality and its pathological states each finds its place.

Lazursky's system exerted noticeable influence on the formation of the psychological views of many Soviet psycholo-

gists, first of all, his closest associates and disciples Vladimir Myasishchev and Mikhail Bassov. It served to stimulate interest in the problem of personality's attitudes to diverse aspects of social activity, the emergence and transformation of human relationships and, in the final count, in the question of the levels of development of the personality. Lazursky accumulated vast material based on psychological observations, which played a large part in the establishment of characterology as a branch of psychology. However, his theory was influenced by mechanism and revealed a lack of understanding of human personality as a social phenomenon in substance. Drawing a line between the endopsyche and exopsyche of every personality, Lazursky mechanically opposed one to the other, since he failed to realise that there is a dialectical relationship between them. Thus he based his typology and principles underlying psychological characteristics on erroneous foundations.

In considering different characterological systems widespread in the 1920s, we should emphasise that at that time psychologists were unable to correctly understand the relationships existing between the personality and the environment, between the biological and the social in a personality. They confused or mechanically counterposed the biological and the social in the personality structure and the constitutional or hereditary (endogenous) and the acquired (exogenous) factors. Thus they could not see how man's active interaction with the surrounding world takes place in reality, in the process of his labour activity. Only somewhat later, as a result of studying dialectical materialism, could they overcome their mechanistic conception. Soviet psychology then began to regard hereditary anatomical-physiological qualities, while not denying their great importance, as just general possibilities for development in a definite direction, whose realisation depended on the existence of corresponding social conditions. The rejection of a mechanistic division of man's psychological properties into endogenous and exogenous made it possible to tackle the question of personality level on a new basis. While at

the previous stage of development psychologists linked transition from a lower to a higher level, and the entire complexity and endowments of personality with the dominance of exogenous factors over ones endogenous and with the ousting of the biological structures by the social, now, after re-building psychological science along dialectical and materialist lines, the view prevailed that the personality level was determined by the social relations actually shaping it, and depended on how thoroughly realised are its essential relations, on how well man takes account of their importance, meaning and character.

At the same time, the realisation and renouncement of the substantial errors underlying Kretschmer's theory led to distrust in the constitution itself. Thus researchers began to silently abstain from considering the constitutional specifics in pathopsychological studies. This had a deteriorating effect on the general psychology research into temperament and character. It was only in the 1950s and 1960s that new ways for studying the problem of individual distinctions were found, as a result of the efforts of Boris Teplov, Vladimir Nebylitsyn, Volf Merlin and their co-workers.

Chapter Twelve

EMERGENCE OF THEORETICAL UNITY IN SOVIET PSYCHOLOGY (1930s-1940s)

Strength was balanced in the following way in the late 1930s and the early 1940s, the final period in the development of the basis of Soviet psychology.

In Moscow, the leading role was played, as formerly, by the State Institute of Psychology, which was then incorporated in the system of the People's Commissariat for Education. From 1937, Filipp Georgiev held the post of director, and in 1938-1941, it went to Konstantin Kornilov. In 1941-1942, Nikolai Rybnikov replaced him (director of the Institute's branch was at that time Alexei N. Leontiev). In 1942-1944 he was succeeded by Sergei Rubinstein, while from 1945 through 1974, the post was filled by Anatoli Smirnov. In October 1943, the Institute was included in the system of the RSFSR Academy of Pedagogical Sciences. It also played an important role in training scientific cadres.

Among other psychological centres in Moscow the following were particularly important: the psychology chair of the Moscow State Pedagogical Institute (headed by Kornilov), the psychology chair of the Moscow City Pedagogical Institute (Nikolai Dobrynin in the lead), the psychology chair and the research laboratory of the First Moscow Pedagogical Institute of Foreign Languages (both directed by Vladimir Artyomov), the chair of the Institute of Defectology (headed by Alexander Luria).

In Leningrad, research in the field of psychology was conducted in the pre-war period and during the war at the special psychology department of the Bekhterev All-Union Institute of the Brain (guided by Boris Ananiev), at the psychol-

ogy chair of the Herzen State Pedagogical Institute (led by Sergei Rubinstein), at the Leningrad Neuropsychiatric Institute (with Vladimir Myasishchev as director), the psychology department of the Leningrad Research Institute of Physical Culture (headed by Avkseny Puni), and in certain other establishments.

The activity of the Ivan Beritashvili's laboratory and in particular the work of Dmitry Uznadze resulted in the emergence of a major centre of psychological research in Georgia (Tbilisi). Ivan Beritashvili led the studies of behavioural mechanisms in his laboratory from the point of view of both psychology and physiology. Very interesting research was conducted under Uznadze, who headed the psychology chair at the Georgia's State University and was mostly engaged in the problem of sets. Research of the sets in child psychology directed by B. I. Khachapuridze was also conducted at the laboratory of pre-school education at Georgia's People's Commissariat for Education. The behaviour of lower apes, in the main the motivational sets in their behaviour, use of implements and herd relationships, were studied at the laboratory of comparative psychology in the Sukhumi ape nursery headed by Nikolai Voitonis.

In Kharkov (the Ukraine), a team of psychologists at the psychology chair of the Pedagogical Institute was active under the guidance of Alexei Zaporozhets. Another team worked in the psychological and the pathopsychological departments of the Ukrainian Psychoneurological Institute, led by M. S. Lebedinsky. A large team of psychologists directed by Vygotsky concentrated in Kharkov in the mid-1930s. It included Vladimir Asnin, Lydia Bozhovich, Alexander Zaporozhets, Pyotr Galperin, Alexei N. Leontiev, Pyotr Zinchenko, Alexander Luria, they established the so-called Kharkov school. In Kiev, too, there was a centre of psychological studies at the psychology chair of the Pedagogical Institute and at the department of psychology of the Ukrainian Institute of Psychology led by Grigory Kostyuk.

Social practice was the foundation of the level achieved by

Soviet psychology. The Great Patriotic War of the Soviet Union against German fascism (1941-1945) faced all sciences, and psychology in particular, with grave demands, putting into bold relief the actual significance and value of scientific knowledge. From the first days of the war, defence problems became central in psychological research. They were connected with anti-aircraft camouflage, reconnaissance, etc. The very posing of these problems would be completely out of the question, were it not for the tangible success achieved before the war in studying ways of raising the capacity for vision and hearing. Among other researches into the psychophysiology of vision and hearing, carried out in connection with the needs of the country's defence, K. Kh. Kekcheyev's methods of preventing flash blindness from rays of searchlight should be mentioned (Kekcheyev headed the laboratory of psychophysiology at the Moscow Psychological Institute). Methods for preventing snow blindness were evolved by Sergei Kravkov, and those for stepping up sensitivity and effectivity of observation at anti-aircraft raids posts were elaborated by Lev Schwarz. Methods were also worked out for reducing the period of adaptation to darkness, increasing sensitivity to hearing and vision, raising precision in visual estimation of distance, distinguishing fast-moving objects, determining the binaural ability, sound camouflage.

During the war, great importance was attached to research into the problem of habits and skills, in particular in connection with the need of training cadres for such trades as flying. In the late 1930s and early 1940s, a new interpretation of habits was proposed. According to it, the nature of habit, its adaptability and the possibility of passing it on to another person depends on whether the conditions, under which the habit should be "switched" and on which its subsequent automatic operation hinges, are realised adequately enough, and in a differentiated and generalised way. This interpretation enabled psychologists to carry out investigations to improve the training of the Soviet air force cadres (research workers Yevgeni Guryanov, Konstantin Platonov).

Directly connected with the problem of habit was the task set to Soviet psychologists soon after the Great Patriotic War broke out: rehabilitation of combat and labour capacity of wounded soldiers. This task also had other aspects in addition to that of habit formation. One should note certain common roots of these problems found in the works of Nikolai Bernstein on the structure of motions and their coordination and the ideas of Vygotsky on the systems composition of man's mental activity, formulated in his own works and in those of Alexei N. Leontiev, Alexander Luria and many others. Research was conducted at special rehabilitation hospitals: in Chelyabinsk Region it was carried out by a team of psychologists under Alexander Luria at the branch of the All-Union Institute of Experimental Medicine; in Sverdlovsk Region, by a team of scientists under Alexei N. Leontiev at the branch of the Moscow State Institute of Psychology; in blockaded Leningrad, by research workers of the V. M. Bekhterev Institute of the Brain under Boris Ananiev; in Tbilisi, by a team of psychologists under Dmitry Uznadze. In addition to these psychologists, an active role in the studies on rehabilitation of lost functions was played by S. M. Blinkov, V. N. Bubnova, S. G. Gellerstein, Leonid Zankov, Alexander Zaporozhets, Esfir Bein, Vladimir Kogan, Asya Kolodnaya, Zhozefina Shif and many other scholars.

Problems involved in shaping mental activity were elaborated in many psychological works. In the latter half of the 1930s and in the 1940s, the principles of the theory of reflection were most fully realised in these problems. Here it was taken as (and actually was) a methodological foundation, meaning not only the initial principles, but also actual researches. The most typical among these were those by Blonsky on the development of memory and thinking, Vygotsky on the development of thinking and speech, Alexei N. Leontiev on the development of mentality, Sergei Rubinstein on the development of consciousness in activity, and Uznadze on the formulation of the set and the problem of the unconscious.

The works by Vygotsky and his close associates, and first

of all, by Leontiev, are noted for their historical approach to research into the human psyche, based on two hypotheses advanced by Vygotsky and dealt with in his works: a hypothesis on the mediated nature of the human psyche's functions, and a hypothesis on the origin of inner mental processes involved in their operation that is at first external and then becomes "interpsychological". The publication of Vygotsky's book, *Thinking and Speech* (1934), which was a theoretical exposition of one of the chief approaches to the mental processes as complicated functional systems, was of signal importance. Vygotsky ideas on a systems structure of consciousness and the unity of thinking and speech in their developed forms, and the stages of development of the child's generalising activity, were very important. No less so was the criticism in this book of the concepts, concerning speech and thinking, formulated by Jean Piaget and William Stern.

Regrettably, this fundamental work by Vygotsky, which came out after his death and was not assessed objectively, was placed into the bracket of those psychological works which were subjected to unjustified criticism on the pretext that their authors supported pedology. For example, Ye. Rudneva in her booklet, *Vygotsky's Pedological Distortions* (1937), declared *Thinking and Speech* to be anti-Marxist, while at the same time casting doubt upon the most valid philosophical concepts of Marxism. It was seldom that Vygotsky's book was mentioned in psychological literature after 1936-37, despite the fact that all psychologists working in the field of thinking and speech could not but take it into consideration. After the 20th Congress of the CPSU which took place in 1956 and put a stop to violations of the Leninist principles in ideology Vygotsky's *Selected Psychological Studies* were published, including *Thinking and Speech*. His psychological doctrine was reinstated and today it occupies its legitimate place in world psychological science. Vygotsky's views underwent constant development. Figuratively speaking, he approached the correct interpretation of the psyche's evolution in a zigzag way, taking to task, one after another, practically all

the most prominent and original non-Marxist psychologists—Alfred Adler, Karl Bühler, Arnold Gesell, Kurt Lewin, Wolfgang Köhler, Kurt Koffka, Jean Piaget, William Stern—or lavishly praising them to the skies and borrowing from them (though he always presented their experimental findings in an original and entirely new light). Then he again "departed" from them, and in criticising their views, made another step forward. Vygotsky's *Thinking and Speech* is much more than just the sum-total of his own ideas on the structural composition of consciousness. It is a reference-point for the subsequent development and expansion of the set of problems tackled subsequently in this field of research.

The idea that man's psyche is a historical phenomenon permeates *Thinking and Speech,* just as other works of Vygotsky. However, it was formulated in his works as an approach to the problem rather than its solution. Thus it was further elaborated in a number of works by psychologists belonging to Vygotsky's scientific school. In 1940, Alexei N. Leontiev defended his Doctoral thesis on the "Development of the Psyche", which was subsequently recognised as the basis for the most important sections of "An Outline of the Development of the Psyche" (1947), a fundamental publication widely discussed in 1948. Leontiev retained the structure of activity as the central goal of his investigation and examined mental activity as a special form of activity—a product and derivative of the external material activity, which was transformed, in the course of socio-historical development, into an inner activity of human consciousness.

Leontiev thought that, to make an in-depth qualitative analysis of the structure of human consciousness, it was necessary to study the specific inner relationship involved in a conscious reflection of reality: that between subjective sense and meaning.

According to Leontiev, the psychological meaning was a generalised reflection of reality assimilated by human consciousness. It was elaborated by mankind, fixed in the form of a concept or skill and existed independently of man's person-

al, individual relation to it. The sense, in his opinion, was created by the relation, reflected in man's mind, of what induced him to respond to that to which his action was oriented as an immediate result. Relying on these delineated and theoretically substantiated concepts, Leontiev analysed the history of human consciousness. He tried to discover the structure of human activity that originated in concrete-historical conditions and, proceeding from this structure, to bring to light essential psychological specifics of the structure of human consciousness. He maintained that the "sense" and "meaning" coincided in primitive consciousness. As the primitive-communal system decayed, the coincidence also fell apart. Under the conditions of developing class society, there occurred "disintegration" of the "sense" and "meaning" as a result of the social division of labour and the "alienation" of labour activity. Later on, Leontiev led a large team of scientific workers at Moscow University who elaborated on this set of problems. In 1963, his book, *Problems Involved in the Development of the Psyche,* in which "An Outline of the Development of the Psyche" was included, won him a Lenin Prize.

We also can find ideas concerning the nature of psychological research, a principled approach to investigations and the tendencies which were dominant in the period under review in the works by Blonsky. Like Vygotsky, he also dealt with problems involved in higher mental processes—memory, thinking and speech.

In 1935, Blonsky's *Memory and Thinking,* one of the more important and mature psychological works published in the mid-1930s, came off the press. Blonsky began his studies of memory when he worked at the State Institute of Psychology (1930-1941). Before that, he did not concentrate on any specific psychological problem, being engaged in elaborating a global system of psychology which he called "behavioural psychology". It should be noted, though, that already in his *Psychological Essays* (1927) he made an attempt at basing psychology upon the idea of development, at approaching every psychological phenomenon from the viewpoint of development

and its history. Thus he wrote in his *Autobiography* (1928) concerning the fundamental thesis of his psychology: "Behaviour can only be understood as the history of behaviour."[1] He developed that thesis in his works published in the mid-1930s, which was directly connected with the shift of all Soviet psychology to the principles of dialectical materialism. In the introduction to his *Memory and Thinking*, Blonsky emphasised: "The key idea, running all through the book, is that the problem of 'memory and thinking' can only be resolved on the basis of its dialectical examination. . ."[2]

Blonsky succeeded in putting into practice many of his ideas. P. Dosev (the pen-name of the outstanding Bulgarian Marxist philosopher Todor Pavlov in those years) remarked in his article, "Problems of Psychology and Dialectics", that Blonsky who set himself the task of investigating, in psychological terms, the most important problems—the relationship between memory and thinking—made a responsible effort to consciously apply dialectical-materialist logic (gnoseology) to psychological problems. Blonsky's research, he continued, convincingly demonstrated that Marxist philosophy was highly important for tackling psychological problems. It also revealed that the role of psychology was great in elaboration of many issues of the theory of knowledge and that the science of psychology was of vast significance for practice.

We can judge of the great impact the fundamentals of dialectics had on Blonsky by comparing the methods he suggested for research into memory in his *Psychological Essays* and *Memory and Thinking*. Questions involved in the psychology of memory are merely mentioned in a footnote in *Psychological Essays:* "There is very little said about memory in my book. In my opinion, the problem of memory is reduced to obtaining visual images (here, probably, Loeb's photo-

[1] P. P. Blonsky, *Selected Pedagogical Works*, Moscow, 1961, p. 44 (in Russian).

[2] P. P. Blonsky, *Memory and Thinking*, Moscow, 1935, pp. 3-4 (in Russian).

graphical theory will have to be applied), and mostly—to the emergence and fixation of open and latent speech habits (here I can refer you to Watson's *Psychology* and also to Wipple's *Manual on Child Studies)*. Thus memory should be regarded as consisting of the 'memory of images' and 'speech memory'. The problem of the former is reduced to the 'history of image': 1) image-copy; 2) consecutive image; 3) visual image . . . and image-notion (compare the works on eidetism), and to what particular stimuli chiefly serve to enliven images (for example, odours exert a strong impact in this respect). The problem of 'speech memory' amounts to that of latent speech habits."[1]

It can readily be seen that in his *Psychological Essays*, Blonsky still adhered to a mechanist concept of memory. Thus, the elements of development (the "history of image") which he tried to introduce into that concept were incapable of reviving the poor programme of the elaboration he suggested. Blonsky was clearly still unable to see dependable ways to investigate memory.

There is an entirely different picture in *Memory and Thinking*. Here Blonsky advanced the genetic theory of memory which was the result of applying the principles of a dialectical approach. The main positions of the theory were clarified within the context of criticising the existing doctrines of memory. Blonsky asserted that they could be divided according to their gravitation towards one of the two diametrically opposite allegations. On the one hand, "memory is a universal function of organised matter", on the other, "memory is a human feature, it is possessed only by people, and then not by all of them." "What follows from this contradiction? How can it be overcome?" Blonsky asks. He himself considered this argument to be the result of a non-dialectical approach to the problem of memory. He examined memory in its development, revealing its inner link with speech and thinking and

[1] P. P. Blonsky, *Psychological Essays*, Moscow, 1927, p. 162 (in Russian).

finding the social roots of its evolution. In opposition to the view current in empirical psychology that there existed four types of memory, not connected with one another (motor memory, or memory-habit, emotional memory, imaginal memory and verbal-logical memory), he regarded these types of memory as the four consecutive (from the point of view of development) rungs or "levels" of memory, each of which was governed by its own, specific laws (though there are also certain common laws for all the levels).

Blonsky proved the validity of his conception by data from the history of psychology (for this purpose he traced the problem of memory from Aristotle to the present). Blonsky established that the controversy among researchers was largely due to the fact that they investigated different types of memory: "Thus, contradictions in the views of researchers are the reflection of real contradictions, actually existing in the reality they study—memory, a reflection of those contradictions that actually exist between various types of memory." He constructed his own hypothesis on the assumption of this idea: "Are not different types of memory just different rungs of its development?"[1] He corroborated his hypothesis by citing data from genetic psychology. He showed that in ontogenesis and in phylogenetic development, we can first observe motor, then emotional, somewhat later, imaginal, and only much later—verbal-logical memory.

Establishing the genetic order of the evolution of memory consummated in the emergence of logical memory, Blonsky tackled an issue to which neither empirical nor "philosophical" psychology could provide an answer—the relationship between memory and thinking. Empirical psychology dealt with the problem of relations between memory and habit (within the framework of associationism, of course), but was incapable of explaining the higher types of memory because it could not resolve the problem of the relationship between simple experience and scientific knowledge. As a result, the problem of

[1] P. P. Blonsky, *Memory and Thinking*, p. 22.

thinking was, as it were ceded to representatives of "philosophical" idealist psychology. However, the latter was only capable of increasing the gap between thinking and memory. Thus, neither speculative nor empirical psychology, guided by the principles of that philosophical trend which, in Engels's words, "exalting mere experience, treats thought with sovereign disdain",[1] could provide an adequate characteristic of higher mental processes—verbal-logical memory and thinking. That was only possible for a psychology which relied on dialectical materialism. It should again be stressed that in that period such a characteristic was contained not only in the works of Blonsky, but also in those by Vygotsky, Leontiev, Luria, Zankov and other Soviet psychologists active in research into the problem of higher mental functions from the angle of Marxist dialectics.

Blonsky showed how memory, as in the course of development it climbed one rung of consciousness after another, gradually approached thinking and finally came up to it so closely that it was difficult to see where memory ended and thinking began. Speech was shown to be that area in which memory and thinking came into such close contact that it was sometimes hard to decide which elements of speech belonged to memory, and which to thinking. All the time one passed into the other. Blonsky did not identify memory, including verbal-logical memory, with thinking ("thinking is a higher, and a new, stage of intellectual development, relying on memory but at the same time differing from it in qualitative terms"). Nor, for that matter, did he identify inner speech with thinking, verbal memory with verbal imagination. However, manifest in Blonsky's system of argumentation and in his conclusions is the tendency to overcome traditions of abstract functionalism, typical of Soviet psychology at that time. This drew the attention of researchers to those moments in mutual links, mutual transitions and transformation of

[1] Frederick Engels, "Dialectics of Nature", in Karl Marx, Frederick Engels, *Collected Works*, Vol. 25, 1987, p. 345.

functions when they passed into others, particularly at the genetically later, and consequently higher rungs of development of the mind. They were attracted to that flowing process of individual moments replacing one another, in which the frozen and fossilised psychological forms were melted. That was a topic constantly raised by Vygotsky.

In this connection, its interesting to analyse relations that existed between Blonsky and Vygotsky, both outstanding Soviet scholars. They followed different paths in one and the same historical conditions, and both came to realise that it was necessary to base psychology on the principles of materialist dialectics. They often looked for specific solutions to one and the same questions, seeing them from different angles but realising that they could apply Marxist theory to advantage in concrete psychological analysis. However, in historical-psychological literature, it was the differences in the views of these prominent psychologists, rather than the similarities, that enjoyed most attention. For example, their divergence on the question of the genetic roots of speech and thinking, of the origin of inner speech was stressed repeatedly, while their struggle to create the foundations of the Soviet science of psychology was ignored. However, it is precisely this struggle that is essential to comprehend the process of evolution and theoretical substantiation of psychology.

The common groundwork, on which the last works of Blonsky and Vygotsky relied, was the idea of mental development, according to which human consciousness is a product of man's development in society, a product of his social being. In the final account, this thesis reflected the way both scientists approached all facts involving consciousness. It explained their rejection of metaphysically immutable concepts frozen in their functional isolation, which were traditionally employed in interpreting higher mental functions. It was not fortuitous that Vygotsky took for his motto Blonsky's words which the latter himself regarded as the basic thesis underlying his system of psychology: "Behaviour can only be understood as the history of behaviour." "This is a genuinely dialectical point of view

in psychology," was how Vygotsky assessed the thesis, which he himself made to serve as the basis for his historical-genetic ("instrumental") method. In the chapter, "Genesis of Higher Mental Functions" of his *History of the Development of Higher Mental Functions*, Vygotsky wrote: "In the opinion of a psychologist-geneticist, the historical form of explanation is the highest of all possible forms. To him, to answer the question, how can we explain a given form of behaviour, amounts to tracing its origin, the history of its development which resulted in the present moment. In this sense, as have already noted in the words of Blonsky, 'behaviour can only be understood as the history of behaviour'."

Blonsky's and Vygotsky's positions also converged on a number of concrete questions. Thus, Vygotsky treated the problem of the relationship between knowledge and thinking in his work *Thinking and Speech*, while Blonsky, too, examined it in his *Memory and Thinking*. Significantly, in both works the dynamic dependence between existing knowledge and developing thinking was explored, which emerged in the course of assimilating new information. Besides, Blonsky relied on research conducted by Vygotsky, Luria and Leontiev, which disclosed the mediated nature of man's memorising, as he characterised age specifics in the early school age group in the psychological sections of his *Pedology*, whose first edition came out in 1934.

As for the differences of opinion that of course existed, these require a thorough examination and analysis, because, more often than not, they can be reduced to terminological rather than theoretical controversies (this was true even when it came to open clashes, as it occurred, for instance, in the polemics on the genetic roots of thinking and speech and on the origin of inner speech). Blonsky, for one, criticised Vygotsky's vague and methodologically unsound proofs to support his idea that thinking and speech have utterly different roots in phylogenesis, which Vygotsky formulated on the basis of the data provided by Wolfgang Köhler, Robert Yerkes and Blanche Learned. Indeed, the very posing of the question of

"speech" and "intelligence" in apes is not clear. Thus, it concerns the origin of expressive-emotional and mental responses of chimpanzees rather than the genetic roots of speech and thinking. Yet Vygotsky's system of arguments becomes perfectly well-substantiated as soon as he passes to ontogenesis. If we assume that the genetic roots of the child's speech lie in his crying, prattle and his very first words as a baby, and that thinking is an embryonic form of application of the most primitive tools, then these are indeed not one and the same. "The independence of mental responses from speech" is not to be doubted, Blonsky agrees. The crux of the matter, however, is that neither the one nor the other (neither the baby's prattle nor operating primitive tools) is speech or thinking. Vygotsky realised this, and this is reflected in his works. And though the genetic roots of thinking and the means of speech which are transformed and used in human speech (not by any means of speech itself) are really different, the genetic characteristic of speech does not begin here. Speech and thinking as such appear only when these roots "cross and coincide in their development and generate an entirely new behavioural form, typical of man". The positions of Blonsky and Vygotsky again come close. "The genetic roots of speech and thinking are common," Blonsky wrote. "This common root is labour: both speech and thinking have developed out of labour. Initially, speech was more of an action. Initial intellectual operations were also actions and it was only gradually that actual actions were replaced by mental ones: an actual fragmentation of an object was replaced by mental analysis, and an actual act of adding up was replaced by mental addition."[1] It is probably from this statement that the concept of forming mental actions in man in six steps, developed by Galperin, derived.

The book, *Memory and Thinking*, contained a serious analysis of the key issues of the psychology of cognitive processes and the theoretical conception of mental processes, and was backed up by two experimental studies published practically

[1] P. P. Blonsky, *Memory and Thinking*, pp. 133, 200.

at the same time—*Development of Thinking in a Schoolchild* (1935) and "Psychological Analysis of Recalling" (1940), as well as by several unpublished works.

The book *Development of Thinking in a Schoolchild* is a summary of the experimental study of various aspects involved in the development of a schoolchild's mental activity, conducted by different methods. In this book as well as in his monograph, *Memory and Thinking*, Blonsky examines thinking in close connection with memory, in their mutual transitions (the issue of the development of notions in schoolchildren, the problem of memory as the base of thinking at the school age, etc.). In fact, the book's purpose was explained by Blonsky himself in his *Memory and Thinking*: "Thinking is not an a priori activity and cannot emerge from an empty mind. The problem of the genesis of thinking is too far beyond my powers. Thus, I restricted myself only to a particle of this great problem. I turned to the age when thinking is shaped especially intensively—to the child age, and concentrated in particular on that child age when the role of memory in the development of thinking can be most easily seen. This is the age of studying, the school age. The results obtained in my research of the development of thinking at the school age have been presented in one of my other works" (Blonsky had in mind *Development of Thinking in a Schoolchild*). As we see, the contents of these two works by Blonsky are closely connected.

Development of Thinking in a Schoolchild is not voluminous. It is crammed with scholarly material related to numerous problems involved in the development of thinking in a schoolchild. It would be difficult even to enumerate in a brief survey all the problems tackled. Among them was presenting a general picture of the development of schoolchildren's thinking, the problem of the development of notions at the school age, the question of comprehension and its stages (raised for the first time in scientific terms), the problem of assimilation and thinking which subsequently became one of the central points of attention in Soviet psychology in the 1950s. Among

the most important questions raised was, for example, that of the correlation between the degree to which thinking was developed and the schoolchild's progress at school. In the mid-1930s, this issue was of tremendous importance for resolution of the problem of the unity of consciousness and activity which was in the limelight of the scientific community at that time.

Thinking in Blonsky's understanding was not a self-contained function. He closely linked it with the child's general development, basing himself on Engel's idea formulated in his *Dialectics of Nature:* ". . . It is precisely *the alteration of nature by men,* not solely nature as such, which is the most essential and immediate basis of human thought, and it is in the measure that man has learned to change nature that his intelligence has increased."[1] Blonsky tried to trace the influence exerted by activity, which he saw as "the most essential and immediate basis of human thought", mainly in ontogenesis. He thought that at an age immediately preceding the school age, thinking is strongly influenced by the child's activity and his practical experience. This is demonstrated by the fact that the so-called child definitions—functional or utilitarian—as well as his narrations (his accounts of what the subject of the narration is doing or what is done to him by other people, and his explanations of various natural phenomena), stem from human activity, i.e., from that which the child knows better than other things. His explanations are especially good when the phenomena he explains are really the result of human activity he is well versed in, because "by the *activity of human beings*, the idea of *causality* becomes established".[2] We can say that if a pre-school child could present his own conception of the world, his treatise should have been entitled: "The World as an Action". Moreover, it would have always been the actions of living beings, similar to man in will-power and consciousness. Blonsky also analyses the evolu-

[1] Frederick Engels, "Dialectics of Nature", in Karl Marx, Frederick Engels, *Collected Works*, Vol. 25, p. 511.

[2] *Ibid.*, p. 510.

tion of thinking in early school-age children, which takes place during games, and in teenagers—in the process of studying.

Blonsky's book, *Development of Thinking in a Schoolchild*, as well as his other works, written later, such as the "Psychological Analysis of Recalling", for example, constituted a further step in the development of the dialectical analysis of processes taking place in memory, thinking, and will-power in connection with man's concrete activity under the conditions of studies and training. In passing it should also be noted here that is traditionally recognised that the conception of activity elaborated by Leontiev in the 1960s-1970s is based on Vygotsky's ideas. This viewpoint is plausible enough, though some psychologists, for example, Andrei Brushlinsky, object to it, maintaining, and not without reason, that Leontiev's views are linked with the theoretical concepts developed by Blonsky, who was his senior colleague at the Institute of Psychology and was the first to regard activity as the structural centre of psychology studying cognitive processes. Leontiev's conception is also undoubtedly connected with Rubinstein's views, especially if we bear in mind the latter's article, "Problems of Psychology in the Works of Karl Marx".

Blonsky's last articles, particularly his "Psychological Analysis of Recalling", as well as *The Problem of Participation of Motion, Practical Activity and Thinking in Perception, Psychology of Desire* and others, clearly reveal his interest in the "junction", "inter-functional" areas in the structure of human consciousness, in transitions and interconnections of mental processes. In the last year before his death, Blonsky headed the laboratory of thinking and speech at the Institute of Psychology. According to archive materials, he outlined a broad programme of research of a wide complex of mental processes, such as perception, memory, thinking, speech, will-power and emotions, in their unity and development (for the year 1941, for instance, he planned research into intellectual emotions). The extensive set of tasks which he planned to fulfil but could not do so because of his early death, was also re-

flected in an optional course on thinking he suggested for 1940, and in several documents of that period.

Blonsky's last theoretical and experimental works were the consummation of the ideological evolution of this outstanding scholar, whose creative activity during the entire history of Soviet psychology, as it were, constituted a reflection of its growth and development.

By the early 1940s, noticeable progress had been made in the study of "sets". These studies were started by Uznadze and his associates back in the 1920s, and were completed in the last years of his life and activity (he died in 1950). At the same time, they became the reference-point for extensive work conducted in our day by a large team of scientists at the Institute of Psychology of the Georgian Soviet Socialist Republic (before 1984, the Institute was headed by Alexander Prangishvili and after him, by Shota Nadirashvili).

The concept of the "set" was central in the theory elaborated by Uznadze and his associates and disciples. Numerous debates and discussions flared up around this concept during the entire history of Soviet psychological science—both in the period of its foundation and in the subsequent years.

Uznadze and his team of researchers worked out a special methodology for experimental study of the set.

To understand the substance of the theory of the set one should take into account the fact that Georgian psychologists distinguish between the concepts of the set and the fixed set. Experiments on the perception of objects for which illusions were typical as concerns the volume, weight, etc. disclosed a state of the psyche, which in the theory of the set was designated as a fixed set, i.e., the set which has been fixed and strengthened as a result of a whole series of set experiments. The fixed set is but a particular case of a more general phenomenon—the set as a universal psychological condition of being prepared for a certain activity.

It is necessary to emphasise that the theory of the set has never been a frozen, static concept. It has been changing, evolving together with Soviet psychology as a whole. If we

compare Uznadze's writings of the early 1920s with the conclusions he arrived at in the late 1930s-1940s, we shall see that over these decades a considerable change occurred both in the philosophical substantiation and the interpretation of the set structure and its physiological nature. This change was due to the fact that the theory of the set was modified as it evolved within the framework of Soviet psychology and together with it.

Critics of the theory of the set made numerous attempts to prove that the set, even if it is present, is not a real psychic act, but only a physiological phenomenon and hence it is out of the competence of psychologists. However, it is perfectly clear that the set is the same psychic reality as other psychic acts (desires, interests, convictions). In any case, they are a certain essential aspect of mental activity, its significant feature or property. To reject the set as a psychic phenomenon means to think that the facts disclosed in certain experiments are not the facts reflecting reality in the human brain and involving the specifics of the process of reflection. Like all mental acts, the set possesses a physiological mechanism, yet, again like all mental acts, it is not to be reduced to a physiological mechanism alone.

The theory of the set is a psychological conception which met with a critical attitude largely because some of its general propositions were for a long time rather vague (the situation was further aggravated by the fact that the basic works on the set were translated into Russian either in the 1930s, or in the 1940s). Thus, for example, the psychological scientific community was really perplexed by the assertion of the set theory adherents that "the set is primary with relation to mental phenomena" (E. K. Abashidze). In all probability, the very formulation of this question was faulty. The problem of the process of reflection being "primary" or "secondary" is a gnoseological one, while the question, what precedes in the process of reflection—the set to psychic phenomena or psychic phenomena themselves to the set—is a purely psychological one. If we assume that the set, as it follows from the works

of Uznadze and his associates, is not only a prerequisite of mental phenomena, but their consequence as well, then we must state that the set both precedes and does not precede the mental phenomena which arise on its basis. There are also other propositions in the theory of the set which need to be specified, even now. However, the importance of these controversial points in the theory of the set is by far outweighted by the role played at that time and now, too, by the studies conducted in connection with the set, which have made up the treasury of Soviet psychological investigations.

Research conducted by Uznadze and his followers made it possible to clarify the conception of the unconscious in psychology. Drawing on strictly objective experimental methods, they made it possible to study the complex forms of the brain's unconscious activity, determined by the concrete psychological content of an objective situation. Thus the problem of the unconscious was shifted to the basis of scientific facts. The theory of the set, disclosing the very substance of the unconscious as a factor rooted in activity and in turn exerting an influence upon it, has taken its legitimate place in the aggregate of ideas and concepts forming the foundation of Soviet psychology.

The most important feature of the development of Soviet psychology in the latter half of the 1930s is the emergence of Soviet psychology's theoretical unity on the basis of Marxist theory.

This theoretical unity was reflected in many books which generalised the chief psychological questions, and first of all, in textbooks and manuals. Most typical of that new stage was the manual for teachers' colleges, entitled *Psychology*, edited by Konstantin Kornilov, Boris Teplov and Lev Schwarz (its first edition was published in 1938, and the second—in 1941). It was the result of the combined efforts of a large team of research workers in psychology. Another very popular publication was the manual edited by Grigory Kostyuk, also bearing the title of *Psychology* (1939), which was compiled by Ukrainian psychologists. Since that time, textbooks on

psychology for higher educational establishments were written jointly—a tradition which, no doubt, was born of the theoretical unity achieved by Soviet psychology.[1]

Sergei Rubinstein's *Fundamentals of General Psychology* (the first edition came off the press in 1940, and the second—in 1947), was instrumental in creating the theoretical base of Soviet psychology. Its publication was a great event, first of all because it met the urgent need of generalisation and theoretical interpretation of the vast material accumulated in Soviet psychology. It was not by chance that this book came into the limelight at the meetings of the section of psychology of the most representative pre-war conference of pedagogues and psychologists—the All-Union Conference on Pedagogical Sciences (April 19-28, 1941). It was also thoroughly discussed at the scientific session of the chair of psychology at the Leningrad Herzen State Pedagogical Institute, which took place on March 22-24, 1941 and which was honoured by the attendance of psychologists from Leningrad, Moscow, Kharkov, Rostov, Sverdlovsk, Yerevan and many other Soviet cities.

The book was voluminous—about 1,040 pages. It dealt with a great many problems from different angles. Suffice it to say that the author intended it as a manual for higher pedagogical institutes and universities, but wrote it in the form of a scientific study and presented the material in a way that called for a debate. These specific features made it difficult to assess the work in unambiguous terms. However, its aim was

[1] Here is the list of major publications of this kind: *Psychology*, edited by Konstantin Kornilov, Boris Teplov, Anatoly Smirnov, Moscow, 1946, 1947, 1948; *Psychology*, edited by Alexei N. Leontiev, Sergei Rubinstein, Boris Teplov, Anatoly Smirnov, Moscow, 1957; *Psychology*, edited by Anatoly Smirnov, Moscow, 1966; *General Psychology*, edited by Arthur Petrovsky, Moscow, 1970, 1976, 1986 (it was published abroad: Berlin, 1973, 1974, 1976, 1983, 1986; Köln, 1973; Sofia, 1976; Helsinki, 1973, 1974; Havana, 1978; Beijing, 1983; Copenhagen, 1987); *Development and Pedagogical Psychology*, edited by Arthur Petrovsky, Moscow, 1973, 1979 (it was also published abroad: Berlin, 1977, 1983, 1987; Tokyo, 1978; Prague, 1978; Havana, 1978; Hanoi, 1982).

clear enough: Rubinstein sought to reflect the general condition of psychological thinking, to give the readers an idea of the problems raised by Soviet psychology and the general trend of its evolution. There was also an easily traceable "super-goal" —to produce an outline of the system of Soviet psychology.

Rubinstein assumed that three problems—of the development of the mind, activity and consciousness, and overcoming abstract functionalism—would help him fulfil the central task he set himself. However, he came up against serious difficulties.

Rubinstein's great merit consists in that he set apart the problem of the development of the mind and included special chapters, dedicated to this problem, in the systematical course of psychology. He managed to produce a profound analysis of the process of mental development, while widely drawing on material provided by general biology, such as Alexei Severtsov's ideas (the principle of the "unity of the structure and function"). Of fundamental significance was the following formulation: "The child develops in the process of education and training."

The second problem raised by Rubinstein was that of consciousness and activity. It was very important, particularly if one has in mind the fact that not so much time had passed since man's consciousness was confirmed as the object of psychological study after behavioural psychology was deposed. In his *Fundamentals of General Psychology*, Rubinstein summed up the interpretation of mentality in Soviet psychology as a reflection of real life—not a passive, mirror reflection, but a reflection effected in the process of man's active impact upon natural phenomena and social events. In other words, in the course of his concrete activity. In Rubinstein's view, the relationship between man's consciousness and his activity should not be treated as a simple external relation, or as that between two parallel rows, or as an identity. The mind and activity are a unity. This thesis was correct but Rubinstein turned it into the basis for studying the mind in a way typical of Western psychology, "divorced from activity and existing in a closed inner world". Rubinstein contraposed dualism

of consciousness and activity, which dominated psychology since Descartes, with the monistic thesis: "All mental processes . . . come out in reality as aspects, or moments of labour, a game, or training in one of the types of activity. Actually, they only exist in mutual connection and mutual transitions of all aspects of consciousness within a concrete activity, taking shape within its framework and being determined by it"; "being realised in various types of concrete activity, mental processes take shape in the framework of that activity".[1]

The clear and concrete formulation by Rubinstein of the question of the unity between consciousness and activity—a formulation which was actually sorely needed since the early 1930s—was also an achievement of great value for the 1940s. It enabled Soviet psychology to escape the destiny of remaining a "descriptive" science, and at the same time removed the danger of its theoretical core being penetrated by the ideas of "mental causality", or attempts, typical of reflexology in the past, to reduce the psyche to physiological processes alone. Psychology which studied it under conditions of concrete activity—and Rubinstein tried to represent it precisely in this light—could from the very beginning be linked to practice. Rubinstein wrote that the Marxist-Leninist thesis on the unity of the mind and activity opened up the path to a genuine psychological explanation by providing an opportunity to reveal real causes behind the fact and processes studied by psychology.

As for the third task formulated by Rubinstein—that of overcoming abstract functionalism—it had been in the field of vision of Soviet psychologists since the debates of the 1930s and was regarded by them as one of the key methodological tasks faced by the science of psychology. However, at the stage under discussion it could not be tackled adequately in a summarising work, as, for example, Rubinstein's *Fundamentals* of *General Psychology,* even though certain approaches to its

[1] S. L. Rubinstein, *Fundamentals of General Psychology,* pp. 11, 148, 475 (in Russian).

solution from the positions of Marxist dialectics were outlined in some concrete studies carried out by Blonsky and Vygotsky.

It is noteworthy that another fundamental manual on psychology, which came out under the editorship of Kornilov, Teplov and Schwarz, also met with criticism because of its functionalism. Shpirman remarked that the book's main shortcoming consisted in that it retained the old system of functional psychology, which reduced the content of psychology to examining individual isolated functions (here renamed into processes). However, he made reservations. He held functionalism should not be confused with the need to analyse mental processes. Overcoming functionalism should not, in his view, amount to abstaining from examining individual mental processes by psychologists, but should consist in: 1) regarding these processes as concrete forms of the personality's manifestations; 2) studying not just individual mental processes, but also more generalised individual-psychological features of the personality; and 3) considering both individual mental processes and more generalised individual-psychological properties of the personality in their development, formation and manifestation in definite concrete types of human activity.

Rubinstein saw the chief means of struggle against abstract functionalism in effecting a transition to studying consciousness in concrete activity, in which it not only manifests itself, but also takes shape. He realised that the tendency to study mental processes in a given concrete activity and discover what were the laws governing their emergence within that activity, had become strengthened among Soviet psychologists.

Rubinstein's book impressed readers with its profound theoretical generalisations, boldness of scientific thinking on acute controversial issues. It operated with amazingly vast research material, not only from the domain of psychology but also from that of related disciplines. The very fact of the appearance of such a fundamental work on the eve of the Great Patriotic War (1941-1945) demonstrated that a principled theoretical polemic had been taking place in Soviet psychology

and that there was no sign of any "impoverishment" of creative thinking among representatives of his disciple at that time.[1] The Great Patriotic War broke out when Soviet psychological science was establishing its theoretical principles. Soviet psychologists had to tackle urgent practical problems linked with the country's defence goals. This meant that the process of its theoretical substantiation was interrupted, to be resumed immediately after the war.

The principles of Marxist psychology that were formed in the late 1930s-early 1940s constituted the foundation, on which the discipline evolved during the next period of its development. In speaking of the foundation of Soviet psychology, we have in mind not so much the sum-total of major propositions applied in characterising, for example, mental processes and personality psychological traits, and not the summary-type theoretical works written by prominent Soviet psychologists of concrete research they carried out: the concept is much broader, in fact. This book has it as its aim to cast light on the question of the emergence of Soviet psychology as a historical-psychological phenomenon. Thus we think it proper to offer a short exposition of the chief prerequisites for its further development, which came into being in that period and which revealed that the process of establishment of the basis of Soviet psychology had in the main been completed at that stage.

1. The psyche is a property of the brain which is the highest form of the evolution of organic matter; this property consists in reflecting the external world. Soviet psychology overcame both idealism and mechanical materialism, and accepted the Leninist theory of reflection as its basis. It was from the angle of this theory that the fundamental philosophical problem of psychology—the psychophysical one—was resolved. (An adequate interpretation of this problem was out of

[1] The book was discussed (this especially refers to its second printing) up to 1948; under the conditions of Stalin's personality cult, the discussion was biased and unjustified accusations were directed against the author.

reach for traditional introspective or behaviourist psychological schools.) Thus, in Soviet psychology the principle of psychophysical unity, or monism triumphed, as distinct from psychophysical dualism dominating the chief trends of non-Marxist psychology. These concepts probably required a more precise definition (which was later noted in the course of the debate). However, their basic content ensured the possibility of a correct approach to the entire range of scientific problems in the field of psychology.

Both general psychology and its specific branches underwent restructuring in line with the theory of reflection. Applied branches of psychology could not, and should not, be contraposed drawing on any fundamental principles of its general theory, since Soviet psychology is characterised by the unity of theory and practice. This fundamental principle once and for all precluded disruption between general psychology and its special branches. The experience Soviet psychologists gained during the Great Patriotic War against fascist invaders confirmed once again that the gap between theory and practice was successfully overcome resulting in close unity.

2. Mental activity is determined by the life style and changes together with it. Speaking of the animal psyche, its evolution depends on the operation of the biological law of natural selection. As for the psychology of human beings, human consciousness emerges and evolves under the influence of the laws governing the development of the mode of production of society's material life. The realisation that human consciousness is a socio-historical phenomenon logically stemmed from this general principle of human consciousness as determined by man's social being. As a result, research into human personality was moved to the forefront of psychological investigations. It is well-known that human personality essentially amounts to the sum-total of social relations. Soviet psychologists regarded this research as a way to overcome abstract functionalism. However, a transition to the study of personality in concrete psychological terms was effected much later.

3. The personality being determined in its development by the socio-historical conditions is not just a passive object of the impact of these conditions, not their epiphenomenon. The personality's inherent feature is its *activeness.* It should be borne in mind that the problem of activeness remained a point of controversy between interpretation of mental activeness as one of the soul's substantive qualities, typical of empirical psychology, and the effort, typical of behavioural psychology, to ignore activeness by excluding it from the mechanistic schema of reflexological propositions. The dominant position of reflexology in the 1920s found its expression in reflexological pedagogics, which saw the pupil as a kind of "reacting apparatus", as only the sum-total of conditioned reflexes, while ignoring his activeness and only looking for appropriate means of "training" him. Reflexological theories sometimes dealt with activeness, but only in a mystified form: primarily as heredity which allegedly determined the structural and functional specifics of behavioural mechanisms, and the qualitative and quantitative forms of energy intrinsic in an individual. Neither was the problem of activeness resolved in another trend of psychology, reactology, because of the impossibility to examine the psychological principles from the angle of "behavioural science" which rejected activeness offhand. The formula accepted in reactology was: "There is no activeness, but only reactivity."

The fact that human consciousness was recognised as the object of psychology and the science itself was restructured on the theory of reflection enabled psychologists to rely on Marxist-Leninist ideas of an active (not mirror) nature of reflection, of the origin of consciousness from labour activity, of man's essence as the sum-total of social relationships, of the role of requirements in the development of an individual, etc., in tackling the problem of the activeness of the psyche, consciousness. Beginning with the latter half of the 1930s, the principle of an individual's activeness promoted by Rubinstein and some other psychologists became firmly established in Soviet psychology. Constructive, experimentally corrobo-

rated conceptions of personality and its development, however, were formed only in the 1970s and the 1980s.

4. The animal psyche and human consciousness can be correctly understood and adequately interpreted only if they are examined in their development. The psyche's development becomes not only an area of research, but the main principle of research in the Soviet science of psychology. Thus, the possibility appeared, for the first time, to implement Sechenov's idea that the future scientific psychology would turn into a set of disciplines dealing with the history of mental processes. The conceptions of development of higher intellectual processes, formulated in the works of Blonsky, Leontiev and other Soviet psychologists, are consonant with this prediction. The dialectical-materialist theory of development provided real conditions for success in creating the theory of the development of the psyche: "The two basic (or two possible? or two historically observable?) conceptions of development (evolution) are: development as decrease or increase, as repetition, and development as a unity of opposites (the division of a unity into mutually exclusive opposites and their reciprocal relation).

"In the first conception of motion, *self*-movement, its *driving* force, its source, its motive, remains in the shade (or this source is made *external*—God, subject, etc.). In the second conception the chief attention is directed precisely to knowledge of the source of *'self'*-movement.

"The first conception is lifeless, pale and dry. The second is living. The second *alone* furnishes the key to the 'self-movement' of everything existing; it alone furnishes the key to the 'leaps', to the 'break in continuity', to the 'transformation into the opposite', to the destruction of the old and emergence of the new."[1] Soviet psychologists became convinced by their own experience how "lifeless, pale and dry" was the metaphysical theory of development, which appeared in child

[1] V. I. Lenin, "On the Question of Dialectics", *Collected Works*, Vol. 38, p. 358.

and pedagogical psychology in the form of the biogenetic and sociogenetic conceptions of the psyche's evolution. Psychology discovered succession in the development of the psyche's higher forms on the basis of lower ones and the qualitative specifics of these higher forms, and traced the evolution of new forms of the psyche and their essential laws of development which were formed in the struggle of internal opposities.

5. Consciousness and activity are not contrary to one another, and are not parallel (as dualists hold), and not identical as spiritualists maintain, who dissolve activity in consciousness, or as mechanists assert, who are apt to reduce consciousness to activity. Conciousness and activity form a unity.

The proposition of the unity of consciousness and activity accepted in Soviet psychology was theoretically formulated, as has been already noted, in Rubinstein's *Fundamentals of General Psychology*. He showed that, forming in activity, human consciousness is also manifested in activity. "Activity and consciousness are not two aspects directed contrariwise. They form an organic whole—not an identity, but a unity." This interpretation of the relationship between consciousness and activity enabled Rubinstein to establish a base to underlie an objective cognition of the psyche, and to reject the allegation by subjective psychologists of the impossibility to thoroughly understand an alien psyche as well as the statement made by behaviourists and reflexologists that any psychological knowledge was allegedly subjective. "The subject's psyche becomes cognisable for others through his activity."[1] The importance of this thesis for the entire problem of psychological methodology is exceptionally great.

6. The concept of the psyche is broader than that of consciousness, under which the highest rung in the development of the mental is understood. It arose in the process of labour and communication and is concretely realised in man's purposeful relations to social being. Thus the domain of the un-

[1] S. K. Rubinstein, *op. cit.*, pp. 10, 17.

conscious was disclosed as the subject of research. The issue of the relationship between consciousness and the unconscious, though correctly formulated, did not find a concrete solution at that time, in spite of the fact that both theoretical and experimental prerequisites already existed. They were objectively manifest in the broad criticism of the psychoanalytical conception of the unconscious (by Blonsky and others) and in the experimental practice of investigating the set conducted by Uznadze's school. At the same time, the notion of instinct, one of the chief concepts used by idealists in characterising the unconscious, was adequately interpreted in materialist terms thanks to the works of Pavlov, Wagner and other Soviet scholars. Instinct was interpreted as a unity of opposites—the inborn and the acquired (conditioned and unconditioned reflexes), the expedient and the inexpedient (given the constant conditions and the changing ones), the stereotype and the plastically-changeable (the stability of the adaptative species behaviour and an evolutionary changeability of its components), the exogenous and the endogenous (response to external actions under the impact of internal humoral, secretory and other conditions).

7. As a psychologist delves into the structure of human consciousness, he discovers interfunctional links and relationships and overcomes functionalism which is intrinsically inherent in empirical psychology. The wish to overcome functionalism in interpreting the key psychological notions is seen in the interest displayed in interface, interfunctional spheres of the psychic on the part of Blonsky, whereas Rubinstein elaborated the theoretical aspect of the struggle against abstract functionalism, stressing the need to study the mind in a concrete activity. The task of overcoming functionalism formulated at that time was not fulfilled, primarily because it required transition to a different system of concepts compared to that which was formed in empirical psychology at the end of the 19th and beginning of the 20th century and which was in the main inherited by Soviet psychology, though interpreted by the latter in materialist terms. The principle of the unity of mental ac-

tivity which was substantiated in theory came into contradiction with the traditional schema of isolated mental functions. Thus resolution of that contradiction became a factor promoting development of Soviet psychology towards setting up a scientific system of concepts that could adequately reflect current problems faced by psychologists, and first of all the general psychological theory of personality.

The theoretical propositions noted earlier are part of the scientific pool, the basis on which all further elaboration of Soviet psychology problems relies. It is precisely during these years that the main prerequisites came into being. They are at the disposal of psychologists today, at the turn of the 21st century.

Chapter Thirteen

GENERAL SITUATION IN SOVIET PSYCHOLOGY IN THE 1950s-1980s

Beginning with certain moments (which differ in various aspects of an investigation), the history of science inevitably turns into its present, and the historian comes back from the sphere of introspection into that of immediate observation, even though he can retain the means for, and the right to, historical analysis.

We see that the last five years before the Great Patriotic War broke out in 1941 marked an important turning-point in the history of Soviet psychology. The chief task psychology faced ever since Kornilov voiced it at the First All-Russia Congress on Psychoneurology in 1923—that of the need to introduce Marxism into psychology—was at last fulfilled. This became the banner under which Soviet psychologists rallied to fight against all moribund elements. It allowed them to overcome the vestiges of crisis phenomena Soviet psychology inherited from its historical predecessor—pre-revolutionary Russian psychology. The aim was to go further than just introducing petty corrections into old attitudes and traditions, while maintaining the historical succession of scientific thinking. It was to blaze new paths for coping with major problems arising in psychological research. This fundamental task was actually fulfilled at the turn of the 1940s, and the next stage (the 1940s-1950s) confirmed it, resulting in providing a Marxist groundwork for psychology in the Soviet country.

At the same time, new tasks objectively arose, and the next period was wholly devoted to tackling these. Now that the theoretical base was built and a single methodology created

for Soviet psychological science, its chief goal was to establish a system of scientific knowledge, in which all particular and specific phenomena and laws of development would correspond to general principles.

Creation of the system of Soviet psychology was the most important task during the entire subsequent period. A number of conditions should have been met to promote its resolution: many particular, smaller tasks had to be tackled, so that the whole span of time covering the 1940s and the 1950s reflected the quest for concrete formulations and approaches towards resolution of these specific tasks.

The fact that now psychology was based on Marxism did not do away with the diversity of theoretical concepts, which evolved and interacted in Soviet psychology at one and the same time. Neither could it preclude the coexistence of various scientific schools and trends. This state of affairs was consonant with the creative nature of Marxism-Leninism—a circumstance which is sometimes ignored by Western historiographers of Soviet psychological science (Raymond Bauer, Josef Brozek, Gregory Razran and others), who attempt to present the matter as if Soviet psychology's shift to Marxist philosophy amounted to rejection of the struggle of views, termination of all theoretical debates, levelling of principled controversies among psychologists, and erosion of distinctions between different psychological schools. History has proved that such views are both erroneous and biased.

Actually, this period was marked by intensive theoretical discussions and sharp polemics on all key problems of psychology. Diverse scientific schools and trends appeared in numerous scientific centres. Their emergence and evolution was linked to original psychological conceptions, of which more later. Yet, as distinct from the motley picture of numerous psychological schools in the West, Soviet psychology is single in its philosophical foundations though widely different approaches to the problems of activity, personality, development of the psyche and consciousness can be observed. Marxism provided a vast launching-pad for exposing extremely variegated hypo-

theses and propositions. It provided for a sharp polemic among scientific schools. This is not in contradiction with, but rather corresponds to its creative substance.

Manifold viewpoints in the living process of accumulation of psychological knowledge were inevitable, of course, and still, to establish a system of psychological science, it was necessary to determine the place occupied by each in psychology and to assess their relative value, real development, soundness of theoretical substantiation, and correlation of the conceptual system recognised by supportes of a particular conception with the conceptual system applied by another trend of psychology. It was necessary to verify all these trends through dialectical analysis, and to determine the ways of synthesising these conceptions into a system of the science of psychology.

The "dual" alternative, which allegedly developed in psychology and which was emphasised by Alexei Leontiev (actually, it was imaginary, as he himself noted), presented a certain difficulty that had to be overcome before a system of psychology could be created: "First, the possibility of a psychological investigation, so to say, from above, based on studying the most complicated specifically human problems... Second, the possibility to move from below, from examining analytically or genetically isolated simple relations and processes". In the first case, the psychologist can easily decend. into the domain of purely descriptive notions due to optional interpretations connected with explanatory concepts referring to mechanisms involved in more elementary processes. In the second case, no matter how often the researcher reiterated that man is a social, active being, this cannot change anything in respect to his investigations, because the chief concepts he deals with "are taken from a fundamentally different system of relations than that of man-society".[1]

This problem is a grave one, indeed, if one takes into account that psychology is developing today, on the one hand, such branches as social psychology, psychology of personality,

[1] *The Science of Psychology in the USSR*, Vol. I, Moscow, 1959, p. 16 (in Russian).

and on the other, is continuing a thorough analysis of elementary cognitive processes in the branches of psychology which are at the junction of physiology, cybernetics. A similar alternative (and not at all imaginary) faced psychologists in the early 20th century, when it had been plunged into a crisis. Hugo Münsterberg came to the conclusion that psychology contains two historical tendencies of evolution, two sciences independent of each other. One he called causal, natural-scientific, explanatory psychology, and the other—theoretical, descriptive or analytical psychology to which he accorded a place contiguous with the sciences treating of the spirit. Wilhelm Wilthey voiced a similar point of view, though differently motivated. Thus we can speak of a certain similarity in the historico-psychological situations.

However, it should be stressed that this similarity is only seeming (Leontiev was quite right in reiterating Vygotsky's statement that the alternative was only imaginary). The crux of the diversion between "explanatory" and "descriptive" psychology was the question of causality. It was rejected by indeterministic "descriptive", "comprehending" psychology but accepted by psychologists adhering to the positions of "explanatory", "physiological" psychology who interpreted it in mechanistic terms. Nothing of this sort could occur in Soviet psychology, since all its departments and branches were based on Marxist deterministic theory.

Taking a single approach to all problems and departments of psychology and thus including them into the system of a single science could only be achieved if the branches elaborating psychological problems both from above and from below, as it were, developed not parallel with, but towards one another. That could only be attained through an historical approach to the problem of forming a person's personality and mentality. At the current stage of psychology's development, this approach actually aided in restructuring the discipline. Thus, it could be expected that in the long run, the gap between these two poles of psychological research would be eliminated, resulting in the emergence of a single scientific theory. At that

moment, however, the gap existed, and no amount of verbiage could conceal it. An indispensable condition for the advancement of Soviet psychological science at all stages was the steady expansion of ideas, ever deeper penetration into their essence of the principles of determinism, closer ties of psychological science with life and socialist construction under scientific and technical progress, first of all with the educational system, and increasingly more profound theoretical interpretation of major trends of scientific development. It should also be considered that at certain stages of the history of psychology the operation of this law was arrested and weakened as a result of the personality cult and its aftermath. Progress was substantially retarded in many branches of knowledge, including psychology, from the latter half of the 1930s throughout the 1940s and in the early 1950s, when the personality cult flourished and the situation in science was deplorable. Many aspects of the theory and practice of psychology were impaired. Certain "officially approved" views were often passed for the ultimate truth, and all the rest were declared erroneous, detrimental and reactionary. At times, the official stand was made use of to stifle criticism and to impose subjective assessments of facts, and settle personal scores. Examples of such attitudes were the criticism of "pedological and psychotechnical errors" in the 1930s, efforts to "eliminate" psychology in the early 1950s, allegations that psychology, as distinct from the physiology of higher nervous activity, had no object of study of its own. It should also be noted that many psychologists readily accepted all the current official positions in words and substituted new verbiage for a genuine transformation of the discipline (for instance, the "subordination" of research into psychological problems to the anti-genetic "ideas" advanced by Academician Lysenko at a session of the All-Union Academy of Agricultural Science in 1948).

Much damage was done by a nihilistic attitude to the history of Soviet psychology and ignoring the Leninist stage in the evolution of its ideological-theoretical foundation, casting into oblivion the activity and writings of many outstanding Soviet

psychologists and terminating research into entire branches of psychology which were declared "useless", "reactionary".

Science in general is noted for its cumulative nature. At any given moment, science is the sum-total of all knowledge at its disposal. It is thus understandable that the general advance of psychological science was obstructed and the process of gathering new data and formulating new laws violated because Soviet psychological experience was not seriously studied on the grounds that in the 1920s and the 1930s, certain psychologists were slanderously charged with political crimes. Suffice it to recall that the conception of Vygotsky, which was exceptionally valuable and promising in scientific terms, had for a long time been drawn on by Soviet psychological thinking only in secret, and his supporters were branded as idealists, accused of cultural historicism. At the joint session of the USSR Academy of Sciences and the USSR Academy of Medical Sciences, dealing with Pavlov's theory, liquidationist trends with regard to the subject-matter of psychology prevailed. The aims and principles of psychological science were viewed by some physiologists, psychologists and philosophers in a nihilistic light. This was reminiscent of reflexological attitudes typical of the 1920s, when psychology's independence as a scientific discipline was also called in question. It should be noted that, while back in the 1920s, the negative view of psychology on the part of reflexologists and behaviourists had no scientific ground and could be largely explained by the objective need to criticise vestiges of subjectivism in psychology, in the early 1950s, the idea of "liquidating" psychology had no principled grounds whatsoever and was triggered exclusively by situational factors.

The trend of "liquidationism" in psychology had no roots either in psychology itself or physiology. Thus, though it somewhat retarded the process of establishing psychology as a system of knowledge, it proved to be rather shallow and was overcome by the end of the 1950s.

Attempts to divide the history of psychology into a "pre-Pavlovian" and "Pavlovian" stages were far removed from

genuine historism, and were also fallacious, since they ignored the existing division of the history of psychology into pre-Marxian and Marxian stages. Supporters of the new division suggested the year 1950, i.e., the joint session of the USSR Academy of Sciences and the USSR Academy of Medical Sciences, as the starting-point of the "Pavlovian" stage. This was utterly unjustified, because the significance of Pavlov's ideas for psychology had been recognised much earlier, at least not later than in the mid-1920s. The termination of research into problems of social and juridical psychology, curtailment of research in the area of psychotechniques and attempts to eliminate animal psychology under the pretext of its opposition to Pavlov's principles, were also groundless. Fortunately, all these developments, in spite of the fact that they were quite damaging to the development of psychology, could not undermine the steady historical progress of the discipline.

The image of Soviet psychology underwent change. Its development is seen as a result of the joint activity of scholars working in different cities and carrying on a lively exchange of scientific information. Such a view was promoted by the USSR Society of Psychologists, set up in 1957, as well as numerous regional meetings and conferences and seven All-Union Congresses on Psychology, held in 1959, 1963, 1968, 1971, 1977, 1983 and 1989. Soviet psychologists take an active part in international psychological congresses, conferences and meetings. The USSR Society of Psychologists is a member of the International Union of Psychological Science. In 1966, Moscow hosted the 18th International Psychological Congress. In 1971, an Institute of Psychology (headed by Boris Lomov) was established within the framework of the USSR Academy of Sciences. It has become, on a par with the historical centre of Soviet psychological science, the Scientific-Research Institute of General and Pedagogical Psychology of the USSR Academy of Pedagogical Sciences,[1] a leading scientific insti-

[1] The Institute was formerly called the Psychological Institute of Moscow University, the Institute of Psychology of the Social Sciences Faculty of Moscow University, the Institute of Psychology, Pedology

tution in the field of psychology. Scientific psychological centres also emerged elsewhere: in 1941, D. N. Uznadze Institute of Psychology was established at the Academy of Sciences of the Georgian SSR, the Institute of Psychology at the Ministry of Education of the Ukrainian SSR, and the faculties of psychology at Moscow, Leningrad, Tbilisi and Yaroslavl universities. Leading Soviet psychologists comprise the Department of Psychology and Age-Group Physiology of the USSR Academy of Pedagogical Sciences. Psychological problems are also studied at the Scientific-Research Institute of Pre-School Education of the USSR Academy of Pedagogical Sciences, at the Scientific-Research Institute of Defectology of the USSR Academy of Pedagogical Sciences and at many other scientific institutions, chairs of psychology at universities and pedagogical institutes.

At present, the following three periodicals dealing with psychology are published in the Soviet Union: *Voprosy psikhologii* (Questions of Psychology)—from 1955; *Psikhologichesky vestnik Moskovskogo universiteta* (Psychological Bulletin of Moscow University)—from 1977; *Psikhologichesky zhurnal* (Psychological Journal)—from 1980. Psychological problems are also elucidated in *Sovietskaya pedagogika* (Soviet Pedagogics) which started publication in 1937; *Voprosy filosofii* (Questions of Philosophy) issued from 1947; *Zhurnal vysshei nervnoi deyatelnosti imeni I. P. Pavlova* (I. P. Pavlov Journal of Higher Nervous Activity)—from 1950, and other journals.

Since the 1960s Soviet psychology has become an extensive, multi-branch scientific discipline. Child psychology (age-group, or developmental) and pedagogical psychology evolved particularly intensively as branches of psychology. They deal with the interconnection between instruction and intellectual development, factors facilitating education and the forming of the personality, the specific psychological features in work with mentally handicapped children, the psychological principles of

and Psychotechniques, and the Scientific-Research Institute of Psychology of the USSR Academy of Pedagogical Sciences.

educational work with a collective and a personality. Among those involved are: Emma Alexandryan, Shalva Amonashvili, Lydia Bozhovich, Leonid Venger, Pyotr Galperin, Vassily Davydov, Leonid Zankov, Alexander Zaporozhets, Grigory Kostyuk, Alexei N. Leontiev, Natalia Menchinskaya, Valeria Mukhina, Nina Talyzina, Yevgeny Subbotsky, David Feldstein, Daniil Elkonin. Much research is involved in differential psychology, psychophysiology, and individual-psychological personality traits—character and temperament, and their correlation with the properties of the nervous system and the types of higher nervous activity (Konstantin Gurevich, Yevgeny Klimov, Natan Leites, Volf Merlin, Vladimir Nebylitsyn, Yevgeny Palei, Boris Teplov, Inna Ravich-Shcherbo). Scientific and technological progress stimulated the advancement of psychology of labour (Fyodor Gorbov, Vladimir Zinchenko, Oleg Konopkin, Boris Lomov), including departments like engineering psychology, space psychology. Psychology of management investigates relevant aspects of managerial activities in work collectives (production, military, etc.), processes involved in decision-making and implementation of managerial impacts, as well as psychological issues concerning personnel selection, training and placement (Akhmet Kitov, Boris Lomov, Albert Filippov et al.). Psychology of management is closely interlinked with intensively developing social psychology and psychology of the personality (Galina Andreyeva, Alexander Asmolov, Alexei Bodalev, Yakov Kolominsky, Yevgeny Kuzmin, Boris Parygin, Arthur Petrovsky, Vadim Petrovsky, Konstantin Platonov, Lev Umansky, Alexei Chernyshev, Yuri Sherkovin, Yekaterina Shorokhova, Mikhail Yaroshevsky). A number of psychological and medical centres were engaged in studying problems of pathopsychology and neuropsychology (Boris Bratus, Bluma Zeigarnik, Alexander Luria, Yuri Polyakov, Yevgenia Khomskaya, Lyubov Tsvetkova), psychotherapy (Modest Kabanov, Boris Karvasarsky), social psychology dealing with problems of the temporary retardation of mental development, oligophrenopsychology, typhlopsychology and surdopsychology (Rakhil Boskis, Tatiana Vlasova, Yuri Kulagin,

Vladimir Lubovsky, Fyodor Rau). Studies were conducted, within the framework of general psychology, of sensation and perception (Alexei N. Leontiev, Alexander Zaporozhets, Vladimir Zinchenko, Yevgeny Sokolov, Mark Shekhter), memory (Anatoly Smirnov, Pyotr Zinchenko, Grigory Sereda), thinking and speech (Aron Brudny, Andrei Brushlinsky, Nikolai Zhinkin, Alexei N. Leontiev, Alexei Matyushkin, Revaz Natadze, Yakov Ponomarev, Alexander Sokolov, Oleg Tikhomirov), and other mental processes. Problems of the theory and history of psychology are examined in the works by Xenia Albukhanova-Slavskaya, Lyudmila Antsiferova, Yelena Budilova, Arthur Petrovsky and Mikhail Yaroshevsky.

In the 1970s and the 1980s, Soviet psychology retained its unity based on the integrity of its philosophical principles. It undertook extensive research relying on four fundamental methodological principles, reflected in all its major conceptions, notwithstanding the substantial difference in the concrete scientific content and scope of organisation as well as prospects of development.

These methodological principles can be observed in concret research efforts. They also serve to constitute the basis of both existing and emerging scientific schools and trends in Soviet psychology.

The first methodological principle, which took firm root in Soviet psychology as a result of its restructuring on the basis of Marxism, was determinism. Complying with this principle meant for modern psychology not only recognising the law-governed and necessary dependence of mentality on the conditions giving rise to it, but also resorting to the mechanism of the causal dependence of mental phenomena on external factors. Rubinstein explained determinism in psychology as "the action of external causes through internal conditions". He thus stressed dependence of these internal conditions, i.e., man's mental world, on the external world, which is primary with respect to it. Leontiev advanced the proposition that the "internal" acts via the "external", in other words, that mental activity generates and manifests iself in work. There is no

discrepancy between these ideas, since the first thesis shifts the problem of determinism in psychology to the purely gnoseological plane, proceeding from the Marxist tenet that the subject changes himself in the process of changing the world in his object-related activity (work). The "external" (that which man creates—objects of material and spiritual culture) is generated in activity, just as the "internal" (the psyche, consciousness, the subject's personality). The principle of determinism is the main one. Actually, all the theories and conceptions elaborated by Soviet psychologists during the 1970s and 1980s are based on this principle. It is a necessary condition for successfully investigating cognitive and emotional-volitional processes, the personality, collective, communication and labour activity. Resorting to the work of outstanding Soviet psychologists which were published in recent years (Zaporozhets, Davydov, Leontiev), we can readily trace the principle of determinism in psychology as the leitmotif of all their propositions.

The principle of activity, the second in importance in Soviet psychology, is closely connected with the principle of determinism. The principle of activity as an approach to studying mentality, personality and interpersonal relations relies on the category of object-related activity formulated by Karl Marx. Activity is interpreted as a dynamic system of man's interaction with the world. As a result of this interaction, there emerges an image of the world mediating the subject's relationship. The chief characteristics of activity are its object-related nature (objects exert an influence on man in a mediated way, as a result of their transformation through activity) and its subjective character (a subject's activeness, the determination of his mentality by the past experience, requirements and emotions, which together shape the general thrust of his activity).

The activity approach presupposes that Marxist psychology must employ the principle of development (historicism), which has retained its importance during the entire evolution of psychology. Activity is regarded as the motive force behind the

development of the mind, personality and interpersonal relations. In transforming the world, man invariably also transforms himself, as well as his relationships with surrounding people—he modifies his intercourse with them. The idea of the activity approach is closely related to the realisation in contemporary psychology of the unity of activity and consciousness, which became one of the fundamental theoretical propositions of Soviet psychology as far back as the 1930s. This idea was opposed in principle to introspective psychology which investigates consciousness outside activity and behaviour, and to behavioural psychology which considers behaviour outside mentality.The activity approach is reflected in Soviet psychology, in particular in the theory of activity expounded by Leontiev, the conceptions of the systems organisation of higher mental functions suggested by Luria, of microstructural analysis of cognitive and executive activity proposed by Zinchenko, of suprasituational activity and personalisation elaborated by Vadim Petrovsky, the leading activity as the motive force of the mentality development in ontogenesis worked out by Leontiev and Elkonin, of the mediation of interpersonal relationships and personality development through work formulated by Arthur Petrovsky, of the mental as a process, advanced by Rubinstein and Brushlinsky.

The fourth methodological principle of contemporary Soviet psychology lies in the approach to analysis of mental phenomena, personality and collective, regarding every, psychological fact as a system which cannot be reduced to the sum-total of its elements, but possesses a certain structure, i.e., a certain set of stable links between these elements that result in its integrity. This approach is designated as a systems principle in psychology propagated by Boris Lomov and Erik Yudin. The systems principle involves a Marxist interpretation of object-related activity and is practically inalienable from an activity approach in psychological research. The systems principle consists in interpreting psychological structures as purposeful and socially-determined formations in the process of individual development, through successive stages of transforma-

tion and differentiation. Psychological structures posses a many-level nature and a hierarchic organisation. Transition from the deepest to the surface level presupposes various modifications, i.e., qualitative changes of the structure. The joint object-related activity, social in nature, and communication, provide the genetic foundation which generates psychological structures (systems). The realisation of the systems principle in a concrete psychological research implies bringing to light the systems-forming element in the phenomenon under review. For example, Galperin regards as a systems-forming element for the psychological concept of a stepwise formation of mental activity its orientational basis. In Arthur Petrovsky's stratometrical conception, such an element is seen in the act of the mediation of interpersonal relations through work.

The methodological principles underlying a scientific discipline reflect the world outlook of scientists themselves. The unity of Marxist views typical of Soviet psychologists accounts for the singleness of the methodological principles underlying concrete research as well as conceptions which are thus elaborated. For lack of space, we cannot present here the complete list of numerous psychological studies conducted in the Soviet Union in the field of general, pedagogical, social, engineering, medical and juridical psychology, in psychophysiology, etc. We shall only dwell upon certain psychological conceptions, in the framework of which concrete research is conducted. We shall regard them as a kind of average-level theories, since all are based upon the general theory and methodology of Marxist philosophy in its application to the science of psychology. All these theories typical of the 1970s and the 1980s, widely differ as to the term and degree of their elaboration, as well as the range of analysed problems.

Three areas of psychology can be singled out in which original psychological conceptions were created in this period, retaining their significance up to the present. First, problems involved in the mental development of children, formation of cognitive structures and emotional processes in children. Second, analysis of brain mechanisms operating in mental activ-

ity. And third, the set of issues involved in elucidation of the relationship between the collective and the individual. The chief role is played, as formerly, by child and pedagogical psychology, as well as psychophysiology (neuropsychology, pathopsychology, etc.). Social psychology and psychology of personality also acquire an ever greater importance. The theories which were evolved in the preceding years by Vygotsky, Leontiev and Rubinstein provided an organic foundation for these new conceptions. The share of the theoretical wealth psychology accumulated over the 1920s and the 1930s in the ideological pool of Soviet psychology was indeed considerable.

In the period we are considering, age-group psychology and pedagogical psychology were the best developed as compared to other branches of psychology. The ideas of Vygotsky, and in particular his theory of the development of higher mental functions, which was considered from an entirely different angle in the 1970s and 1980s and became a reference-point in the elaboration of problems involved in mental development, were taken as the basis of the most important conceptions according to which the process of mental development and primarily cognitive processes were interpreted.

Vygotsky based himself on Engels's ideas on the role of labour in man's adaptation to nature and transformation of natural forces by means of implements in the process of production. He advanced the idea that labour, man's work with instruments are conducive to modification of his behaviour, to his distinction from animals, consisting in the mediated character of his activity. Such mediation becomes possible because man uses symbols, or signs (words, figures, etc.) in his inner mental activity, in the same way as he applies tools in his external, practical activity. The similarity between an implement and a sign (in a psychological sense) consists in that both enable man to effect a mediated activity. The distinction between them lies in their direction, their thrust. An implement is directed outwardly, it is intended to produce a change in an object. It is a means of man's external activity, oriented towards mastering nature. A sign, on the contrary, is directed in-

wardly. While not changing anything in an object, it exerts an impact on man's behaviour. The mastering of nature and the mastering of behaviour are mutually connected, since the changes man effects in nature inevitably cause certain changes in the nature of man himself. The application of signs (auxiliary means), i.e., the transition to a mediated activity, reconstructs the entire mental activity of man, in the same way as the application of implements introduces changes in the natural functioning of the human organs, greatly increasing the power and extending the bounds of man's mental activity.

Man's evolution takes place while mastering all these means (both implements and signs) in the process of instruction, or education. Therefore, instruction occupies the central place in the system of organisation of a child's life, in determining his mental development. Thus, mental development cannot be considered outside the social medium, in which the mastering of familiar means that make it possible to assimilate the experience gained by the former generations occurs. Therefore, it also cannot be understood outside instruction. Thus, we can see that in Vygotsky's psychological theory, the Marxist idea of man's social essence is realised. Vygotsky formulated the general genetic law of cultural development as follows. Every function observed in the child's cultural development appears twice, on two planes: first on the social plane, and then on the psychological plane; first among people, as an interpsychical category, and then inside the child, as an intrapsychical category. Every higher mental function necessarily passes through an external stage in its development, since it is initially a social function.

We can take as an example the history of the indicative gesture, which is of vast importance in the development of the child's speech and, in Vygotsky's words, is to a considerable degree an ancient basis of all higher behavioural forms. At first, this gesture is nothing but an unsuccessful prehensile motion directed at an object, meant to precede an action (the hand intends to take an object but cannot reach it). An adult comes to the child's assistance, since he interprets the gesture

as pointing to an object which aroused the child's interest. Thus, an unsuccessful prehensile motion turns into an indicative gesture in the mind of another person, who renders it the sense of pointing, indicating. The gesture has thus turned into a sign, and a prehensile motion has been transformed into an indication. It is only after this transformation has been accomplished that the child himself begins to see his gesture as an indication. The gesture (sign) for others thus turns into a gesture (sign) for himself. The child is the last to comprehend his own gesture: at first, the sign's meaning is created by the concrete situation, and then, by the adults surrounding the child. Vygotsky traces the same law of development in the child's speech. A word expresses at first the attitude towards a thing (the first stage). This objective link between the word and the thing is used by adults functionally, as a means of communication with the child (the second stage). The word also acquires meaning for the child (the third stage). And then the word, which was at first a means of exerting an impact upon others, becomes a means of governing his own behaviour.

Thus, all higher mental functions are genetically underlied by people's social relations. Vygotsky noted that man's psychological nature is a totality of social relations, transplanted internally and turned into the functions of his personality and the forms of its structure. Contrary to traditional psychology, which genetically derived social behaviour from individual behaviour, Vygotsky proved that higher mental functions at first take shape as relations between people, and only later become mental functions of a single individual. At first glance, it may seem that meditations, arguments and proofs genetically precede a debate generated by the clash of meditations. According to Vygotsky's theory, however, it is vice versa: the debate generates meditations. The process of the emergence of personality consists in that a personality becomes what it is, through that which it presents to others.

External signs as a means of the development of behaviour are an important diagnostical means for a psychologist who

must determine whether the child's intelligence is defective. Observation of mentally handicapped children shows that if the child makes use of signs, certain compensatory opportunities exist, and the child's intelligence can be promoted. If, however, the use of signs is retarded or is totally absent, intellectual development is either retarded or ceases altogether.

Vygotsky's dialectical approach to the interpretation of the process of mental development is inseparably connected with his *principle of genetical (historical) studying of mental facts.* The essence of the genetic principle consists in that the mental phenomenon under study is regarded as a process. Thus, the investigator tries to restore all moments of its dialectical development, to perceive and understand how they succeed each other, and attempts to represent the mental fact in its concrete historical situation.

Vygotsky emphasised that the essence of this principle consist in the historical interpretation of the human psyche as "applying development to the investigation of phenomena".

Vygotsky provided, in his works, examples of how the genetic principle can be applied to psychological research. One example is the nature of his research into the so-called "egocentric speech" of a child—a special kind of speech found in little children, which does not serve the purpose of communication and does not change anything in the child's behaviour, but is a sort of accompaniment to his activity and emotions: egocentric speech of a little child is turned to himself. With each passing year, this kind of speech becomes ever more myserious for the people around the child; as a rule, its share in children's speech reactions (the coefficient of egocentric speech) drops to zero as the child reaches school age. Some psychologists (in particular, Jean Piaget) held that egocentric speech simply dies off, disappears at the threshold of the school age. Vygotsky, however, took a different view of the problem. Basing himself on the genetic principle, he advanced the hypothesis that egocentric speech does not disappear but is transformed into inner speech, which is very important in directing human behaviour. Thus, the main specific features of inner

speech (difficult to study experimentally) can be interpreted in genetic terms, through an analysis of the development and transformation of egocentric speech.

Vygotsky maintained that instruction precedes and leads the development of the human mind. He suggested the kind of ties between psychology and pedagogy that developed in the recent decades. These ties, actually, have always existed. Konstantin Ushinsky, the great Russian pedagogue, stressed that psychology occupies the first place among all sciences for its importance to pedagogy. In order to educate man all-sidedly, it is necessary to first study him from all sides.

At present, the ties between psychology and pedagogy take on a special character. Over a number of years, these ties have been for the most part an external adaptation of psychology to existing pedagogy, and an external account, as it were, of psychology's "data" by pedagogy. For example, a "psychological substantiation' 'of the already formed and recognised pedagogical methods, and propositions, their improvement and elaboration was often regarded among the tasks facing psychology. At the same time, pedagogy often based itself on certain dogmatically understood "psychological formulas" (for instance, an assertion that thinking of a junior school pupil is devoid of abstraction, that it is always exclusively concrete).

Today, the aim of harmoniously developing an individual, with the considerable acceleration of scientific and technical progress as well as achievements in concrete psychological studies, enable us to take a new look at psychology's possibilities and the role it should play in the process of instruction and education of schoolchildren. Soviet psychologists formulate the tasks facing psychological science, on whose implementation the solution of major pedagogical problems hinges.

The first task consists in so organising psychological studies that they would precede existing pedagogical practice, blazing new paths for it and providing for an extensive quest for the new in instruction and education, rather than substantiating that which already exists. (This refers to the content as well as methods of education and instruction). Such research is

conducted in the field of pedagogical psychology by Zaporozhets Zankov, Davydov, Galperin, Menchinskaya, Elkonin, Amonashvili.

The second task, stemming from the first, resulted from the demands on pedagogy by scientific and technical progress. The volume of information that must be assimilated is growing rapidly. It has been established that information quickly becomes outdated and needs to be refurbished. Thus it is clear that instruction which is largely orientated on remembering and maintaining the material in the pupil's memory, can meet modern requirements only in part. Moreover, the problem of forming such traits of thinking comes to the fore which would enable the pupil to independently assimilate ever new information, and of developing capabilites which would be retained by him even after his education has been completed, so that man should be able to keep in step with accelerating scientific and technical progress. The February 1988 Plenary Meeting of the Central Committee of the Communist Party of the Soviet Union confronted psychology with many urgent tasks in connection with the development of people's education: to define the general laws of development of the psyche in ontogenesis; to elaborate a psychological characteristic of the activity and personality of man at each age by bringing to light psychological mechanisms through which man assumilates social experience, systematised in the fundamentals of sciences, morality and ideology; to reveal the psychological principles of the shaping of human personality in the process of upbringing and education by showing the interconnection between the individual's upbringing and his mental development; to study the correlation between age and individual specific features of people; to clarify the psychological reasons underlying deviations in the mental development of individuals from the general pattern and elaborate methods for diagnosing these deviations, and provide psychological guidelines for organisation of differential instruction.

The major conceptions of contemporary Soviet psychology are underlied by the thought linked to Vygotsky's ideas per-

taining to the fact that the individual must assimilate mankind's historical experience, fixed in objects of material and spritual culture, through activity; only then may an individual become a full-fledged member of society. "This is a process as a result of which an individual reproduces historically formed human abilities and functions" (Alexei N. Leontiev).

The idea that mental development occurs through assimilation of social experience and education, is central not only to educational psychology, but also to psychology of upbringing. The personality of a young man who assimilates social experience is not formed by itself, but through changing his inner world, his inner position, which mediates all educational influences (Lydia Bozhovich, Tatiana Konnikova). The stand taken by an individual, the aggregate of the motifs of activity in which his needs, ideals, assessments and self-appraisal are manifested, resulting from upbringing and education, make the individual relatively independent of diverse external influences which are refracted through the inner conditions noted earlier. In realising this idea, Soviet psychologists proposed a strategy of actively shaping mental processes and personality traits. Contrary to psychological-pedagogical conceptions, which only registered the attained level of mental development, researchers today proceed from the need to create operative experimental models of man's mental development.

The concept of a stepwise formation of mental actions is one of the most important theories of Soviet age-group and pedagogical psychology. It was advanced in the 1950s by Soviet psychologist Pyotr Galperin. The central idea in his theory is that assimilation of knowledge takes place in the context of a pupil's activity, as a result of and under the condition that he carries out a definite system of actions. Man is not endowed by nature with a ready-made mental ability: he learns to think as he assimilates mental actions. The pedagogue's aim is to effectually guide this process, controlling not only this activity in man.

Relying on the basic principle of Soviet psychology—that the results of mental activity but also the process of forming

of the unity of consciousness and activity, Galperin, Talyzina and their associates see the assimilation of knowledge as a process which takes place as a result of performing and mastering certain new actions. From this standpoint, the initial form of mental activity is material, external and real, capable of producing changes in objects of the surrounding world. New elements of internal, mental, thought activity can be mastered and assimilated only by passing through the stage of external, material activity (work with real objects) or the stage of materialised activity (work with models). Since the activity involves real objects or schemes and diagrams, the pupils (and the teacher) can firmly control each operation in the action. The next stage is linked to speech: the pupil explains orally the course of the operation. The action thus passes from the external to the internal form. And finally, at the last stage, the action occurs on the internal plane: this is drawing on the acquired knowledge in thought actions. The teacher can control each stage of assimilation of knowledge and, if he discovers that the pupil does not understand the material or makes some mistakes, he can take the pupil back, to an earlier stage of forming mental actions and assimilating knowledge, and again coach him until he masters the actions and knowledge.

The progress and quality of assimilation are determined by the orientating part of cognitive activity, i.e., by the sum-total of the objective conditions, on which the pupil relies as he performs mental actions. According to the concept of a stepwise formation of mental actions, generalisation is an important aspect of thinking.

Menchinskaya, Kostyuk and other Soviet psychologists discovered that the assimilation of material by pupils depends on the structure of their cognitive activity, which in turn is determined by educational methods. In other words, they proved that assimilation of knowledge and development of the pupils' thinking depend on the character of training, its content and methods. A higher development effect is obtained when the pupils guided by the teacher search independ-

ently for the traits of concepts under study and for solutions to some new types of problems. The assimilation becomes especially effective if in the process of instruction, conditions are created for passing from internalisation to exteriorisation (which is manifested in applying the obtained knowledge to solutions of visual-active problems), for working out generalised methods to be employed in mental activity.

Is mental activity formed in the course of pupils instruction, that is, their ability to independently solve cognitive tasks, independently find a way out of a precarious situation? This was how Elkonin and Davydov formulated the issue. They advanced a hypothesis according to which inability to think independently can be explained by applying an unproductive method of introducing new knowledge: quite often, junior school pupils are made to arrive at generalisations in a formal-logical way. Over a long period Soviet primary school has been based mainly on producing generalisations by passing from the concrete, particular, to the formally general, similar and identical. As a result of such an approach, no ability for abstract thinking was formed in a child, or this ability emerged spontaneously, despite the teaching methods rather than due to them. The argument that concrete thinking and transition from the particular to the general, i.e., inductive reasoning, is typical of junior school pupils, though based on considerable research, does not prove anything in this case. Instruction may well be organised in such a way that concrete concepts are formed on the basis of transition from the general to the particular, and not necessarily from the particular to the general.

Proceeding from these considerations, an attempt was made to introduce school disciplines in the way that would be conducive to forming in the pupils the ability to think in a completely abstract manner and to rely on scientific concepts in subsequently analysing concrete phenomena. To put it differently, schoolchildren were taught to effect the movement of thought from the general to the paricular, and special school programmes in mathematics and the Russian lan-

guage were worked out that reflected this principle.

Junior pupils were first of all acquainted with the mathematical natural series, a special kind of a more general mathematical object—quantity. A hypothesis was proposed: can a child be at first confronted with the general notion (quantity), and only afterwards presented with particular cases of its manifestation? To render the formation of such a concept possible, it was necessary to reveal the inner content of the objects under study, i.e., to bring to the surface and fix in a certain model the inner qualities of the object, demonstrate to the pupils its quantitative parameters. For example, to find out with the pupils the length of the object, its weight, and to show them the equality of objects. In other words, to reveal the interrelation between quantities. Thus, the children were acquainted with the relationships between the objects even before the concept of number was introduced: they distinguished the parameters of quantities in these objects (weight, volume, length, area etc.), compared these objects by certain parameters, writing down the relations of equality or inequality by means of symbols. The use of letter symbols enabled them to abstract from the objects themselves and pass to considering the quantities on the mental plane. Thus, junior pupils assimilated the mathematical phenomena of reversibility and irreversibilty, transitivity, monotony, etc., even before they became acquainted with the natural series. This allowed them to undertake studying equations in the first semester of the 1-st form (Elkonin, Davydov).

Research proved that the letter symbolics and the formulas fixing the chief properties of quantities can easily be mastered by first-formers even prior to their being introduced to numbers. As a result of such an organisation of teaching, the children developed, much earlier than usually, certain prerequisites for the formation of abstract thinking and cognitive abilities, i.e., for consciously mastering the subsequent school material (and, at first, the numerical series) and raising inquisitiveness.

The Russian language was taught in much the same way. The functional linkage between the form and meaning of the word was revealed to the school pupils, i.e., they were taught to perform linguistical analysis, proceeding from the general to the concrete. A feeling for language began to develop in them, and in the future they assimilated grammar and style rules with considerably less effort and remembered them for a much longer term.

The concept of training and development elaborated by Leonid Zankov is closely related to the ideas represented in the works of Galperin, Elkonin and Davydov. Zankov's concept developed primarily in the 1950s and the 1960s. This is an experimental didactic system, whose high effectiveness was corroborated by the research conducted by his disciples and followers. Zankov proved, by carrying out in-depth psychological analysis of the traditional teaching process, that the school material was unjustifiably simplified, that the rate of its assimilation was much too slow, that there were numerous monotonous reptitions tiresome for the pupils and the volume of theoretical knowledge was insufficient. He elaborated four psychologically substantiated principles of effectively training the pupils and proved by experiment the expediency of their implementation at general educational schools.

The decisive principle of the psychological-pedagogical system proposed by Zankov is that of *training on a high level of difficulty*. If the school material and the methods of teaching do not present the pupils with obstacles calling for actively overcoming them, their development proceeds slowly and inertly. It should be pointed out that Zankov had in mind not any kind of difficulty, but only such as is connected with the realisation of interdependence between the phenomena under study, of their internal essential links. Thus, the principle of training on a high level of difficulty directly led to the second principle of Zankov's experimental didactical system—that of the *leading role of theoretical knowledge*. This principle is in many respects close to Davydov's principle of content generalisation while not rejecting the sig-

nificance of skills and habits and their role in the pupils' cognitive activity.

The third principle suggested by Zankov is that of *studying the material at a rapid rate* (however, it does not mean it should be done in a hurry). The rapid rate of training, he maintains, makes it possible to reveal different aspects of knowledge being acquired, to deeply penetrate them and link them up. And finally, the fourth principle—that of *the pupils' conscious attitude to the process of studying.* What Zankov had in mind was that the pupils must be aware of the order of exposition of the material, of the need to learn certain of its elements by heart, and to understand the sources of errors in its assimilation.

Zankov's ideas met with a wide response in the system of education and were acclaimed by part of the teaching staff. Many teachers (Vladimir Shatalov and others), whose progressive practical work was highly appraised by the Soviet public at an early stage of perestroika, restructuring in the country's social development in the late 1980s, were able to make use of the rational core of his psychological-pedagogical work.

A close objective link existing between cognitive and emotional processes, the "unity of the affect and the intellect", about which Vygotsky wrote as far back as the 1930s, helped develop a uniform approach to the problem of evolving the motivational and emotional spheres in man. In the early 1970s, Zaporozhets reviewed, in principle, the concepts current in psychology on the monosemantic relationship between the motive and the activity caused by it. He suggested that the internal determination of the activity by motives is not a direct process. It takes place with the assistance of a process of psychological regulation which Zaporozhets termed the emotional correction of behaviour. Actually, it has much in common with cognitive correction. As distinct from cognitive, and in particular, sensory correction, emotional correction is not based on the process of correspondence of the operational side of activity with the objective significance of the com-

ponents of a precarious situation, but on making the entire direction of the individual's behaviour correspond to the meaning (for him personally) of the situation and the actions transforming it, which help him satisfy his needs.

Zaporozhets attached great importance to the regulating role of the emotional anticipation of the probable consequences of the performed action and the situation which may arise after that action takes place. With age, emotional anticipation, which is absent at the early stages of ontogenesis, becomes an ever more essential condition of performing an activity, especially in those types of game and productive activities, complex in structure and motivation, that begin to develop in the pre-school age. The child has to imagine—and he is learning to do so—the meaning that can result, perhaps in the distant future, from his actions, both for himself and for other people. In other words, he needs not only to assess his action, but also to see in it an activity and experience it in emotional terms.

Zaporozhets saw the origin of emotional anticipation in that *special internal orientational-investigatory activity* which arises on the basis of the child's actual interaction with the environment. A kind of a functional system emerges, which combines affective and cognitive processes, and "clever emotions" are formed and intellectualised, while the cognitive processes, taking on an affective colouring, acquire the ability "to distinguish the meaning" and "to create the meaning". Of particular importance for the appearance of the phenomena of emotional anticipation is the "language of emotions" actively assimilated by the child, i.e., those imaginative-expressive means of a visual expression of the forthcoming events which play the role of the models of their meaning for the child and the adults close to him. Alongside the "language of emotions" which the child assimilates as he makes contact with art, actively "utilising" artistic works, he also applies the expressive means current in everyday communication. Adults initially applied these means to influence the children's emotional sphere. Subsequently, they become the

means which the child himself draws upon in his intercourse with the people around him. As a result, they enter, as a mediating link, into the structure of his emotional processes. This makes it possible for the child to go through an affective emotional experience of not only that which directly happens to him "now and here", but also of the imagined events, meaningful both for the child himself and the adults around him. Experimental research performed by Yadviga Neverovich, N. V. Trunova and others under Zaporozhets's guidance, convincingly confirmed the theoretical propositions underlying his concept of emotions and their development.

It should be noted that Zaporozhets's concepts on the "emotional anticipation" of the consequences of a performed action and the child's assimilation of the "language of emotions" are a projection and elaboration of the ideas expressed in the 1920s by Vygotsky.

In 1926, Vygotsky closely approached the problem of the unity of affectation and intelligence, touching upon the problems of aesthetical perception and experience in one of his early works, *Pedagogical Psychology*. The young scholar, who also wrote, shortly before the publication of the *Pedagogical Psychology*, his *Psychology of Art*, displayed the greatest independence of judgement precisely in this area, being uninclined to look up to any authorities.

Vygotsky paid particular attention to the problem of "art's moral effect", whose psychological essence, it seems to us, in many respects approximates what Zaporozhets later called "emotional anticipation". Vygotsky stated that art's moral effect is not to be doubted. It is manifested in a brightening up of one's spiritual world, in a certain resolution of personal conflicts and, hence, in the liberation of some fettered and suffocated powers, particularly those pertaining to moral behaviour. What turns "art's moral effect" into a specific "action" for a person consuming these products? Vygotsky recalls Anton Chekhov's short story, "At Home", concerning a father who by dry admonitions tried in vain to explain to his seven-year-old son the harm of smoking. Only when he told

the boy a naive tale about an old king and his little son who became ill and died of smoking, did he unexpectedly achieve what he was driving at. The boy promised, in a choking voice, that he would quit smoking. Thus, the tale told by the father, i.e., his drawing on the "language of emotions", became for the boy an action whose effect was unpredictable. It called forth the state of "emotional anticipation", thus ensuring "art's moral effect". Events taking place in the tale evoked and clarified in the child's mind new powers, enabling him to feel both his father's fear and concern for his health with such power that its moral effect, facilitated by the father's earlier insistent efforts, unexpectedly had an impact not achieved formerly. Vygotsky repeatedly cited such examples. Once he recalled from U.S. pedagogical literature the unexpected reaction by schoolchildren to *Uncle Tom's Cabin,* a novel by Harriet Beecher Stowe. They expressed regret that the time of slavery was gone for ever. As he overcame the limitations of the behaviourist, reactological approach to man's psychology which left its imprint on his *Pedagogical Psychology,* Vygotsky tried to interpret the analysed psychological facts in the light of the concept of the "activeness of an aesthetical emotional experience", by formulating a hypothesis on the existence of a "special activity" comprising the "nature of an aesthetical emotional experience". "We cannot yet state for certain," he wrote, "in what does it consist, since psychological analysis has not yet had its last word concerning its composition. However, we already know that it concerns a very complicated constructive activity performed by a listener or viewer and consisting in that the perceptor himself builds up and creates an aesthetical object out of the external impressions he experiences, to which object all his subsequent reactions refer." Vygotsky designated this activity as the "secondary creative synthesis".

Thus we can see that Zaporozhets and his associates, like P. Ya. Galperin, D. B. Elkonin, V. V. Davydov and other experts in age-group psychology (their main purpose was development of the cognitive sphere of the personality), fol-

lowed the path indicated by Vygotsky as they turned to the emotional sphere. They maintained the same orientation and stuck to the same tradition.

One of the most popular concepts of the personality and its development in the 1960s and the 1970s were, L. I. Bozhovich's notions on the *integral structure of the personality, determined by its orientation.* This orientation is underlied, she stated, by a stable, dominating system of motives, with the major, prevalent motives accounting for the general structure of the personality's motivational sphere. Human needs included in the motivational sphere differ, in Bozhovich's view, not only in their dynamic characteristics (stability, power, etc.), and their content, but also in their structure. She singled out the needs of an immediate character (for instance, organic needs) and those goal-mediated. This determines the way in which man is induced to action. As distinct from the first type of needs (immediate needs), those of the second type presuppose the existence of impulses which do not coincide with man's immediate desire. They arise when some sufficiently stable and strong need presupposes performance of certain intermediate actions, not immediately attractive to man. Under these conditions, the goal is a link in satisfying man's immediate need and thus the way of its satisfaction proves to be a mediating factor. Bozhovich wrote that a specific feature of a mediated need is that the goal man has set himself (or has accepted), being linked to the satisfaction of an immediate need, assumes the property of being able to stimulate an activity which possesses no stimulating power of its own.

Bozhovich formulated her concept within the framework of age-group and pedagogical psychology. Hence, its core is made up of ideas characterising the development of personality. Bozhovich advanced the hypothesis that even in very young babies there is an unsatiable thirst for new impressions. An adult satisfies this need as he introduces the child to the world of social reality. During early and pre-school childhood, the adult is the main factor in the formation of the

child's personality. The child's effort to win the adults' approval in all his activity stimulates him to such behaviour, of which he is not aware as of his immediate need, and makes his behaviour purposeful. The game is the leading form of the child's activity: it embodies the tendencies of the development of needs at each particular age. Children assimilate the adults' culture in games, as they enter the adults' life in their imagination. Bozhovich stated that in the late pre-school age, children display a desire to go to school, in which their main cognitive needs are embodied. This causes the intensive formation of personality qualities required for schooling. The role of adults also remains dominant for the child at school. Particularly great in this new social situation of personality development is the role of the teacher. However, to the end of the junior school age (at 11-12 years), the social situation of personality development undergoes changes—the most important factor in mental development becomes the effort to win approval of the classmates and be included in the collective of his peers. Comparing himself with them in the conditions of constant communication promotes the formation of the child's self-appraisal and self-awareness. Now he develops the effort to correspond not only to the demands of the people around him, but also to the standard of his own self-appraisal. At the senior school age, there occurs a qualitative shift in mental development (Bozhovich does not distinguish between mental development and personality development.—*A.P.*), with the formation of a scientific and moral outlook becoming the determining factor. The pupil's own tasks and demands, in her opinion, not only motivate his behaviour, but also perform the function of organising all his other requirements and efforts, which together make up the orientation of his personality.

The concept of personality and its development in childhood was subsequently evolved in the works of Bozhovich's followers and associates (I. V. Dubrovina, V. E. Chudnovsky, and others).

B. M. Teplov's theory on capabilities as individual-psycho-

logical specific features of man's personality, constitute an important department of pedagogical psychology. Capabilities are treated as man's psychological specific traits on which his success in acquiring knowledge and skills depends, but which cannot be reduced to these alone. Capabilities are manifested in mastering knowledge, skills and abilities, but are not to be reduced to them. There is no identity between capabilities and knowledge, or capabilities and skills, or capabilities and abilities.

Capabilities appear, with respect to skills, abilities and knowlege, as a certain possibility. But whether knowledge and skills will be actually acquired, whether the possibility will turn into reality—that hinges on many conditions.

Teplov rejected the identity between capabilities and essentially important components of activity—knowledge, skills and abilities. However, he emphasised their unity. Capabilities are only manifested in an activity, and then only in an activity which cannot be performed if these capabilities are absent. We cannot speak of a person's gift for drawing if he has never been taught to draw, if he has not acquired any skills indispensable for that kind of artistic creativity. Only in the process of special lessons in drawing can it be discovered if the person has, or has not, such capabilities. It will be seen in how quickly and easily he assimilates the specific methods, learns to feel the shades of colour and discover beauty in the surrounding world. Capabilities consist not in knowledge, skills and abilities as such, but in the dynamics of their acquisition, in how quickly, easily and profoundly are the knowledge, skills and abilities, necessary for a given trade, acquired. It is here that distinctions come to the fore, which allow us to speak of capabilities.

If a certain totality of personality qualities meets the demands of an activity the person tries to master over a stretch of time, allotted for that purpose in accordance with pedagogical principles, there are grounds for concluding that he possesses capabilities for that kind of activity. On the other hand, if another person, all the other conditions being the

same, cannot meet these demands, one can suppose that he does not possess the corresponding psychological traits, i.e., capabilities. This is not to say, of course, that this person in general cannot acquire the necessary skills and knowledge, but only that the process of mastering them will take longer, will require considerable effort and time on the part of the teachers and strain all the powers of the pupil. Moreover, the final result will be but modest. This does not altogether exclude the possibility that the person's capabilities may develop with time. Capabilities, being individual-psychological peculiarities, should not be opposed to other qualities and properties of the personality—the quality of the mind, specific features of memory, traits of character, emotional properties, but should be added to them. If one of these qualities or their totality meets the demands of the given activity or is formed under the impact of these demands, there are grounds to regard the given individual-psychological peculiarity of the personality as a capability.

Individual distinctions revealed in capabilities can be of a qualitative and a quantitative nature.

Seen in qualitative terms, capabilities constitute a complex set of man's psychological properties ensuring him success in an activity, a set of "variables" which enables him to advance towards the goal in different ways. Underlying the same or similar achievements in performing some kind of activity may be sets of vastly different capabilities. This brings to light an important aspect of the personality's capabilities: some absent properties can be compensated by others, which can be developed through stubborn effort and persistency.

Teplov showed that even the absence of such a decisive musical gift as the perfect pitch is not to be considered as an obstacle in the person's option for training in a musical profession. The testees with no perfect pitch are known to have developed a set of qualities that included a good ear for timbre, fine memory for musical intervals, etc., which actually substituted for the absolute pitch, as it assumed the latter's functions.

The property of compensating some capabilities through developing other capabilities opens vast opportunities before man, as it widely extends the range of his option for a trade and improving his skills. The qualitative characteristic of capabilities is inseparably linked with the quantitative one. Discovering what concrete psychological qualities meet the demands of a given kind of activity, it becomes possible to answer to what extent they are developed in a given person in comparison with others.

In Teplov's opinion, correct interpretation of the essence of man's capabilities presupposes elucidation of the problem of their relationship with the brain, which is the substratum of all mental processes, states, features and peculiarities. Like all individual-psychic peculiarities of the personality, capabilities are not given to man ready-made, as it were, as a gift of nature. They are not inborn but are formed during his life and activity. Man is born without any mental qualities: he is only endowed with a general opportunity for acquiring them. It is only as a result of an interaction with reality and vigorous activity that the human brain begins to reflect the surrounding world, thus manifesting its individual-psychological traits and peculiarities.

Negation of inborn capabilities, in Teplov's view, is not absolute. While not recognising inborn capabilities, he nevertheless did not negate the inborn nature of man's differential peculiarities (inclinations), comprised in the properties of the nervous system. These could be conducive to a successful performance of a certain activity (more often, of a group, a whole range of professions, trades, kinds of labour activity).

Teplov tried to reveal the way the properties of nervous processes influence the qualitative specifics of the structure of capabilities. He showed that the weakness of nervous processes is not only a negative quality of the nervous system, as it was held formerly, but also a positive one, because the weakness of nervous processes is the consequence of its high reactivity. "A weak nervous system," Teplov wrote, "if one may

resort to an analogy, can be likened to a highly sensitive photographic plate. It demands great care, being more than any other afraid of exposure or overexposure (a super-powerful irritant! or a prolonged action of a conditioned irritant!). This is, of course, a negative property. But it is the consequence of a highly positive one—high sensitivity." A high sensitivity of the nervous system can be considered an inclination, on the basis of which capabilities will evolve, connected with labour activity requiring a high reactivity and impressionability—i.e., a certain fineness of the spirit.

It has been earlier noted that the development of Teplov's views on man's individual-psychological peculiarities, including his theory of capabilities, was influenced by A. F. Lazursky's "characterological" ideas. The latter tried to set apart man's capabilities and anatomo-physiological inclinations, divided capabilities into more general and more specific, and examined their relationships. However, Teplov did not follow Lazursky in all respects. Lazursky drew a clear line of demarcation between the endopsyche as an internal hereditarily-determined sphere of an organism, and the exopsyche, in which he saw man's relation to the external world. Moreover, he dualistically opposed the one to the other. Teplov overcame this dualism between the internal and the external. He wrote that capabilities ("inclinations" in Lazursky's terminology) do not exist outside certain relations between man and reality, just as relations can only be realised via certain capabilities.

M. G. Yaroshevsky, who is engaged specifically in examining the problem of the psychology of scientific creativity, showed that the school of Teplov, to which a group of his own associates, elaborating the theory of capabilities (N. S. Leites, V. A. Krutetsky, K. M. Gurevich and others) belonged, at first existed just as a "research collective" and became a "school as a scientific line" only after Teplov's death. It can be traced in the research conducted by scientific collectives in Moscow, Leningrad, Perm, Kazan and many other cities of the Soviet Union, as well as in other socialist coun-

tries (for instance, the research group of Jan Strelau in Poland).

The *concept of the psychic as a process*, formulated by A. V. Brushlinsky, directly evolves the ideas of S. L. Rubinstein. The psychic is primarily a process, which can be presented as a living plastic process, constantly forming and giving birth to images, mental states and concepts. In the course of the constantly changing interaction of the individual with the external world and hence its own constant modification, the psyche reflects the dynamic nature of the surrounding world ever more fully and takes part in the regulation of man's actions and deeds. To carry out a psychological investigation of thinking, means to study the inner causes underlying the result of the process of cognition—for example, the solution of a problem. The resultant fact reveals the process of thinking that has led to it. Psychology must disclose specific internal causes to explain external phenomena. Here we see the realisation of the general principle formulated by Rubinstein: external causes operate through internal conditions, meaning that any impact is exerted over man not directly but being refracted through his feelings, thoughts and notions. Interpreting thinking as a process, Brushlinsky also saw the determination of thinking as a process. The determination of thinking is not something completed from the very start. It is formed and evolves in the course of tackling a task, i.e., it manifests itself in the form of a process. The entire course of the process of thinking is not outlined from the beginning, because in the course of fulfilling a task, new conditions emerge and corrections and specifications are made, all of which cannot be contemplated beforehand. Thinking as a process is realised as an activity of man's personality and is therefore closely connected with motivation. As he begins to think under the influence of some of his needs, in the course of his thinking activity man forms new cognitive needs. The concept of the psychic as a process, like many other theoretical propositions of Soviet psychologists, has the principle of the unity of consciousness and activity both as it prereq-

uisite and its result, i.e., it is understood that mentality manifests itself and is formed in activities.

All these concepts of the development of the psyche and its formation in the course of activity imported an impetus to child and pedagogical psychology and facilitated its establishmen as a leading branch of psychological science. Psychophysiology and the related departments of psychological theory and experimentation, involving the brain mechanisms of mentality, also retained a leading position during the entire period. Development of these areas of the discipline is linked to the natural-science tradition of psychology in the Soviet Union.

Speaking of the brain mechanisms of the psyche, it is very difficult, of course, to single out a psychological and a physiological aspect properly, since their unity eliminates this methodologically faultless contraposition. It thus compels a historian to expatiate upon these questions with equal justification in works of the history of psychology and in those on the history of physiology. The only criterion for ranking these works in one or other discipline is their heuristic value for the evolution of the one or the other. Thus, N. A. Bernstein's *physiology of activeness* and P. K. Anokhin's *theory of functional systems* organically entered the theoretical treasury of Soviet psychology, though they were elaborated by physiologists, and even today play an important role in the interpretation of the complex relationships observed between the brain, mentality and activities.

As he examined the self-regulation of motions, Bernstein proved that all man's movements occur in accordance with the same pattern (it is retained, for example, in man's writing, irrespective of whether he writes with his right or left hand). Bernstein sees in movements, contrary to the behaviourist or reflexological approach in which they were regarded as only a chain of isolated reflexes, an integral, though complicated, motive act, regulated by the subject in conformity with his need of achieving the goal as an image of the expected result. This stand was for Bernstein a starting-point in formulat-

ing the chief propositions of the concept of physiology of activeness he was evolving. In accordance with this concept, behaviour is viewed as an active attitude to the environment, determined by the model of the required future, i.e., the anticipated result of the movement. This model is constructed by the brain on the basis of information at its disposal on past experience and the current situation in which the movement is taking place. The organism must choose an effective way for achieving the goal under the conditions of a probability forecast for the resolution of what Bernstein calls a "locomotion task". Having outlined its behaviour programme, the organism fights for its realisation by overcoming the obstacles placed in its way by the environment. As it meets resistance on the part of the environment, the organism has to introduce into that programme certain sensory corrections, which makes it possible to actively reconstruct behaviour. Thus, a certain relationship emerges in movements construction between its leading and background components. The leading components are determined by the locomotion task, and the background components, by the system of coordination depending on the specific features of the environment. The reconstruction of behaviour occurs on the feedback principle. Bernstein formulated his theory of self-regulating systems in 1935, i.e., ten years before the first works on cybernetics appeared. He brought to light the role played by afferent impulses that serve to correct the procedure of motive acts. He showed that effective movement cannot take place without a constant afferent correction built on the feedback principle. This theoretical proposition is of a fundamental nature, as it testifies to the fact that behaviour should not be regarded as a "reflex arc" as it stemmed from the traditional physiological notions, but as a "reflex circle". At various levels of movement construction, there occurs a continuous cyclic interaction between the organism and the environment, with any act assuming the nature of an afferent-effector system, whose growing complication increases the importance of the afferent factor, by means of which the act is controlled.

The theory of functional systems, suggested by P. K. Anokhin, is rather close to Bernstein's concept. These two theories emerged independently, practically at the same ime (the first experiments in which the basic parameters of his future concept were outlined, were conducted by Anokhin in 1932). The similarity of these theories is largely explained by the fact that both scholars took as their reference-point the ideas of the outstanding physioloist I. M. Sechenov, who treated behavioural mechanisms as a functional system. The concepts of Bernstein and Anokhin supplemented and specified one another and provided the general principles of the organisation of processes involved in the organism-environment interaction. Here we see the intersection of the development lines of psychology and physiology—those continuing from I. M. Sechenov to I. P. Pavlov and A. A. Ukhtomsky, and then taken up by P. K. Anokhin and N. A. Bernstein and their numerous disciples and adherents.

The core of Anokhin's theory is the notion of the functional system as a certain organisation of activeness of its various elements, leading the organism to a corresponding useful result. Anokhin bases himself on the concept of afferent synthesis to construct his theory. As a "central mechanism of the functional system", afferent synthesis makes is possible to thoroughly process, compare and synthesise the information necessary for an organism, indispensable for ensuring the act of adjustment. It helps to resolve three basic problems the organism faces under the conditions of performing any behavioural act: "What to do, how to do it, and when to do it."

Anokhin included the following components into the stage of afferent synthesis: first, the dominating motivation, which serves to sift out, to discard the information which has no functional link with the existing motivation. Second, the situational motivation, i.e., the totality of external influences which provide to the organism the fullest information on the choice of action that would primarily correspond to the existing motivation and is thus conducive to the emergence of the

"nervous model of the situation" in the central nervous system, i.e., a ramified and integrated system of excitations. Third, the starting afferentation. Anokhin wrote: "If the dominating motivation determines what an organism should do, and the situational afferentation determines the way it should do it in the current situation, the starting stimulus determines the third important parameter of the behavioural act: when that which has been prompted by both the motivation and the situation should be done. . .". Fourth, memory as a component of afferent synthesis which helps organise a purposeful line of behaviour. As a result of afferent synthesis, the process of decision-making takes place. The performed synthesis is consummated in the construction of the model of afferent elements, representing the most significant parameters of the future results of an action. The apparatus responsible for the construction of such a model was called by Anokhin the "acceptor of the action". It can readily be seen that the idea of the "acceptor of the action" is very close to Bernstein's notions of the "model of the required future".

Every time an intermediate stage in the performance of a behavioural act does not correspond to its feedback afferentation if the acceptor of the action has alrealy formed, corrections are made, and as a result, behaviour as a whole becomes purposeful and harmonious. Anokhin noticed that in the past, researchers who studied the brain concentrated their attention on the action itself rather than on its result. Thus, the notion of the "reflex arc" as an "open", "linear", "non-closed" process assumed the dominant meaning for the physiologists and psychologists (the stimulus—processing in the brain—the organism's reaction). To "close" the reflex arc would only be possible if the idea of "feedback afferentation" were recognised, i.e., of the brain's receiving and processing the information on the result of the action. The concept of "feedback afferentation" (close to that of the "reflex circle" in Bernstein) as the antithesis to the "reflex arc" filled in the gap between the action and its chief effect. Feedback afferentation makes use of the mechanism of the acceptor of

the action in case of erroneous behaviour, and corrects the process of action.

Anokhin saw the formation and functioning of the acceptor of the action as a manifestation of the most important property of the nervous system—anticipated reflection: phenomena which occur at macrointervals in the environment are reflected in the organism at microintervals, anticipating that which is yet to happen. The notion that the reflection of reality is active and can, relying on the past experience, anticipate events, is closely connected with the theory of reflection.

In the 1960s, the views of Bernstein and Anokhin exerted an ever increasing influence upon the further development of psychology; in particular, they promoted an in-depth probing and understanding of the human psyche as the function of the brain.

Thus, Anokhin himself linked his biological theory of emotions to his concept of functional systems. According to this theory, the nervous apparatus of negative and positive emotions is activated, depending on whether the afferent model of anticipated results (the acceptor of the action) coincides or dissociates with the impulses signalling an actually achieved result.

The ideas advanced by Anokhin, just as those formulated by Pavlov, on the activation of the cerebral mechanisms (the state of the nervous system characterising the level of its excitation and reactivity), given a non-coincidence between the formerly emerged "internal dynamic stereotype" and the "changed external dynamic stereotype", were further developed in the "requirement-informational theory of emotions" elaborated by P. V. Simonov. In the latter's view, an emotion is the reflection by the brain of the volume and quality of a certain vital need or requirement, and the probability of its satisfaction assessed by the brain on the basis of genetical and acquired experience. Whether he realises that or not, man is always comparing the information of what is needed to meet his requirement with what is at his disposal at

the moment of its emergence. If the subjective probability of meeting that requirement is great, it serves to stimulate positive emotions in man, while negative emotions arise when the subject is aware of the real or imagined impossibility of meeting that requirement or a decrease in the probability of its satisfaction as compared with the forecast made earlier. According to Simonov, the function of emotions is not to be reduced to a simple signalling of the presence of useful or harmful influences on an organism. To illustrate the idea on the adaptive role of pain as an emotion, Anokhin noted that the pain from an injured joint restricts the motive activeness of a limb. Simonov thinks that the organism could switch on the automatically functioning mechanism that would preclude any movements if the significance of the emotion were limited to the possibility of just signalling danger for the injured organ. He writes that the sense of pain proves to be rather elastic: when the need for movement becomes really great (for instance, if the very life of the subject is threatened), the movement does take place despite the pain. In other words, emotions play the role of a kind of "cerebral currency"—a universal measure of value, and not a simple equivalent that functions in conformity with the principle: harmful—unpleasant, or useful—pleasant.

The requirement-informational theory of emotions is used by Simonov and his associates to analyse the mechanisms of emotional stress and the role it plays in the inception of neuroses and psychosomatic disorders. They are engaged in research to discover methods that would help diagnose the degree of emotional stress in people who are engaged in strenuous activities (for example, in cosmonauts).

The 1950s-1960s saw the establishment in the Soviet Union of a new psychological discipline that occupies a place at the junction of psychology, medicine and physiology—*neuropsychology* founded by Alexander Luria. Its purpose was to study the operation of the cerebral mechanisms of higher mental functions on the material of various local brain lesions and investigate those psychophysiological factors, whose disfunc-

tioning, given a local brain lesion, brings about a systems disintegration of the complex forms of mental activity.

Alexander Luria established the theoretical base for his *concept of the systems dynamic localisation of mental processes* by developing the ideas of his teacher Vygotsky, author of the concept of social determination and the systems structure of higher mental functions. According to it, the assertion that a concrete mental function corresponds to the activity of some restricted area of the brain (a constant "cerebral organ") is inconsistent: the brain is working as a single whole, though it consists of numerous parts, each of which has its own task to fulfil. Impairment of any mental function is connected with an extensive lesion, and the lesion of any area of the brain usually causes the deformation of many brain functions, not just the failure of one of them.

Luria maintained that the entire brain takes part in ensuring any more or less complex psychological activity, though it consists of a great number of highly different sections. According to Luria, the brain consists of three functional blocks (the energy block, the block of reception, processing and storage of information, and the block of programming, regulating and controlling voluntary movements and actions). Each of these blocks participates in the organisation of the complex mental activity, making its own contribution. In conformity with this concept, the brain structures should be directly coordinated with the physiological processes taking place in the corresponding brain structures, rather than with the mental function as a whole or its various links. Higher mental functions in man are complex functional systems characterised by a high degree of flexibility and the possibility to interchange or reconstruct its separate links.

The neuropsychological concept proposed by Luria contains principles explaining the organisation of mental functions. In his view, various mental functions, such as visual-image thinking, constructive praxis, counting, etc. are all underlied by the factor of simultaneous analysis and synthesis. If, for a certain reason, this factor fails or is impaired, these

functions also fail, or else fall into disorder. Luria viewed this appoach to research into the structure of higher mental processes as a graphic example of a systems analysis of the structure of mental activity ("neuropsychological factor analysis").

The flexibility and interchangeability of the components of higher mental functions enabled Luria to substantiate in principle the possibility of their resuscitation through restructuring the functional systems comprising their physiological foundation. The Vygotsky-Luria concepts single out both an intra-systems and an inter-systems restructuring of the functional systems—the shifting of the processes onto the level of their comprehension, replacement of the failing link of the functional system with a new one, etc.

In this connection, the process of resuscitating the failing functions comes to the fore. This work was launched by Luria and his associates during the Great Patriotic War in rehabilitation hospitals for the wounded. It was discovered that while elementary functions (hearing, eyesight, etc.) practically cannot be resuscitated if the corresponding areas of the brain are impaired, more or less complex mental processes can be restored on a new base, by reconstructing the impaired activity. For example, the writing function, which normally is an auditory-motor habit, can be restored, in case of the impairment of the temporal sections of the brain, on the basis of the word's visual-kinesthetical analysis. The habit of reading, which was earlier based exclusively on visual perception but was impaired as a result of the wounded occipital area of the brain, can be subsequently restored drawing on the tactile and motive principle (by outlining letters). Other functions can also be resuscitated on a new foundation. This served to corroborate the theoretical thesis that mental functions are not some clearly-limited manifestations of the work of the brain's particular areas, but represent complex functional systems of diverse processes in their different relationships. During the last years of his life, Luria published two works on the psychology and pathology of memory (*A*

Small Book on the "Big Memory" and *The World Lost and Regained*), in which his neuropsychological concept was reflected.

Luria also was engaged in neuropsychological analysis of speech disturbances, connected with defects in coding the inflowing information. He examined the most important aspects of *neurolinguistics,* concentrating on the problem of coding and decoding vocal information. Neurolinguistics regards speech as a systems function and treats its disturbances (various kinds of aphasia) as a systems disorder involving the primariy defect of the mental function and the secondary disturbance caused by it. Luria and his followers (Ye. D. Khomskaya, L. S. Tsvetkova and others) successfully combine in their experimental work the systems analysis of the cerebral mechanisms of vocal activity and speech disturbances with the theoretical concepts of psycholinguistics.

The views of Luria on the problem which came under close scrutiny by philosophers, physiologists and psychologists at the turn of the 1970s—that of the relationship between the biological and the social—were of vast significance for its solution. Developing the dialectical-materialist tradition in psychological science, he opposed reduction of the psyche to the action of only social, or, on the contrary, only biological factors, as well as the "theory of two factors". He held that there are no "purely biological processes" in man that would be independent of his being included into certain social relations. The psyche, mentality is socially determined. Higher forms of man's conscious activity do not appear through the evolution of the biological laws of the development of the brain, but are the product of the most complicated socio-historical processes, the results of social labour, the use of tools of labour and people's communication by means of codes which have been formed within the context of social history. Luria firmly rejected all kinds of reductionism, be it reflexological or sociological reductionism. He rebuffed all attempts to reduce the complex forms of human psychology to elementary physiological functions. He advanced the idea of de-

veloping a psychologically-oriented physiology based on the ideas of Sechenov and Pavlov. Though Luria recognised the great contribution made into the establishment of such "psychological physiology" by Bernstein with his physiology of activeness and by Anokhin with his theory of functional systems, he did not regard their concepts as complete psychological doctrines which could provide physiological analysis of the integral forms of man's conscious psychological activity, but only as providing the basis for such profound analysis.

In the 1960s, Teplov developed his *concept of differential psychophysiology*, which was proved experimentally by his closest associates V. D. Nebylitsin, E. A. Golubeva, I. V. Ravich-Shcherbo and many others. This concept, which was given an impetus after the "Pavlovian" session of the USSR Academy of Sciences and the USSR Academy of Medical Sciences, as distinct from many other efforts to apply Pavlov's teaching to psychology that were of a purely declarative, speculative character, proved to be highly heuristic. It turned out to be a tangible contribution to the development of Soviet psychological science and physiology of higher nervous activity. This concept was of particular significance for physiology of higher nervous activity, since it was the most serious advancement of Pavlov's ideas in the period when his theory was viewed dogmatically.

Tracing the roots of Teplov's concept, we shall arrive, besides Pavlov's theory, at the ideas proposed by A. F. Lazursky, who tried to explain individual distinctions by the correlation of the properties of character with various aspects of the activity of certain nervous centres. Lazursky's characterology exerted influence on both Teplov's differential psychophysiology and his theory of capabilities.

In the early 1950s, Teplov started research into individual psychological distinctions in their unity with the neuro-dynamic substratum, based on Pavlov's teaching on the three basic properties of the nervous system (its force, balance of excitation and retardation processes and mobility of nervous processes).

The data obtained by Teplov's school testify that manifestations of each of the basic properties of the nervous system serve to form a certain syndrome, a totality of indicators which are linked to and correlate with one another. The force of nervous processes was studied experimentally as the nervous system's endurance with respect to excitation, the even temper as balance between the processes of excitation and retardation, and the dynamics as the rate at which conditioned reflexes and differentiations were formed. Mobility was treated as the ease with which the signs of irritants changed over, and lability was examined as the rate of the emergence and termination of the nervous process. Actually, the pattern of the basic properties of nervous processes emerged, as a result of Teplov's investigations, as more complex and highly differential in comparison with that which was accepted in the traditional physiology of higher nervous activity. In particular, it followed that Pavlov's concept of four types of higher nervous activity he proposed in the early works (a strong balanced mobile, a strong balanced inert, a strong unbalanced and a weak type) did not comply with the data obtained in experiments.

Establishing the existence of a feedback relationship in the force of nervous processes, Teplov and Nebylitsin placed the question of the actual value for an individual of the opposite poles of one and the same property of nervous processes and, correspondingly, of various types of the nervous system. The question presented not only a theoretical but practical interest as well. Teplov stated that a weak but sensitive nervous system was not inferior to a strong but less sensitive nervous system. A weak nervous system is less enduring, yet, due to its greater reactivity, it can prove in certain respects more efficient than the nervous system of people belonging to a strong type. However, it was proved that there are some kinds of activity for which a strong nervous system is indispensable. The hypothesis was verified by experiments. E. A. Golubeva and L. B. Yermolayeva-Tomina investigated the dependence of the capacity for mental work on the force of nervous proc-

esses, K. M. Gurevich examined the dependence of human behaviour in definite situations arising during professional activities on the properties of the nervous system. The work of Teplov and Nebylitsin laid the foundation for realising the connection that existed between the properties of the nervous system and man's capabilities. As was already shown, in resolving the problem of capabilities, the most important properties of the nervous system must by all means be taken into account—a high sensory perceptibility as a result of the weakness of nervous processes, easily formed positive and retardation links as characterising the dynamics of the nervous system, concentration of attention in its connection with the ability of a strong nervous system to resist distracting irritants. Thus man's mental properties and the physiological properties of the brain were proved to be an inseverable unity.

Teplov's death (1965) and the premature exit of his closest disciple and associate Nebylitsin (who died in an air crash in 1972), did not halt research into differential psychophysiology. It was continued at the Research Institute of General and Pedagogical Psychology of the USSR Academy of Pedagogical Sciences by E. A. Golubeva, I. V. Ravich-Shcherbo and others and at the Institute of Psychology of the USSR Academy of Sciences by V. M. Rusalov and others.

It was not the aim of this section of the book to provide an analysis of all major research lines launched in the Soviet Union during the two decades under examination. The author has considered only those among them which he regards as the most significant and most illustrative of the continuity of the tradition that can readily be traced in the history of Soviet psychological thought—the link between the past and the present, which makes it possible to better see the prospects, the future of the discipline. The author of course may be accused of certain subjectivism, but he thinks this is inevitable in the case of a historian who approaches the elusive border dividing the past from the present. In the next chapter he will run this risk to a still greater degree.

Chapter Fourteen

PERSONALITY AS THE CENTRAL PROBLEM IN SOVIET PSYCHOLOGY IN THE 1970s-1980s

Each period of the history of development of any science is distinguished by certain key problems, which are included in the general model of theoretical and experimental problems typical of this particular period. Thus, a historian of biology would probably point out the gene as such a key concept, which subsequently found its material embodiment in a definite section of the DNA molecule characterised by a specific set of nucleotides, the linear succession of which accounts for coding the genetic information.

A historian of psychology, in turn, may pick out such concepts which are definitive for a certain stage in the development of psychological science. Thus, for the 1920s, such a key concept was "animal and human behaviour", brought to light in research dealing with the "higher nervous activity (behaviour) of animals" (Pavlov), "combinative reflexes" (Bekhterev), the "evolution of species behaviour under the impact of natural selection" (Wagner), the "ways of the organism's adaptation to the environment through changing animals' behaviour while not changing their organisation" (A. N. Severtsev). In the following few years psychologists concentrated their attention on the concept of consciousness (the 1930s and 1940s) and activity (the 1950s-1960s).

In the recent decade and a half, the central place in Soviet psychological studies has been occupied by the concept of personality. It is noteworthy that in the 1920s and the first half of the 1930s, the term "personality" was not, as a rule,

even to be found in the subject indexes of psychological books.

Today, we can safely assert that interest in the psychology of personality will not abate in the future, but will even increase, involving ever new contingents of researchers and modifying many branches of psychological science, by placing in the focus of their attention the problem of personality and its formation in the system of social relations.

Personality as a philosophical concept, that is, an integral person in the totality of his individual capabilities and the social functions he performs, a person as the product and at the same time the subject of social relations, whose essence is not to be reduced to an abstraction inherent in a separate individual but is an aggregate of all social relations, was fathomed by historical materialism and analysed in all its possible characteristics. Psychologists base themselves on these philosophical findings as they conduct research into that problem.

And what about psychology itself? The crux of the matter is not that psychologists could not explain and interpret man's personality with the methods at their disposal—they could accomplish that with more or less success, but that, while recognising a priori the categorial nature of the concept of personality, they are faced with considerable difficulties in applying it theoretically as a category of general psychology.

It would seem that compiling a list of elements making up personality as a certain psychological reality, is the most safe road towards overcoming theoretical hazards connected with the need for interpreting personality as a psychological category. In this case, personality would be viewed as a set of qualities, properties, features and characteristics typical of the human psyche. This approach to the problem can be called "collectionist": personality is turned into a vessel, a receptacle filled with the traits of temperament, character, prevailing needs and interests, capabilities and gifts, inclinations. The task of psychologists would be reduced to cataloguing this wealth of features and bringing to light their unique combination manifest in each individual. There is a number of

works, primarily belonging to the 1950s-1960s, written precisely in this vein.

There is nothing precarious, of course, in the concept of personality as a set of personality traits. However, it was not heuristic, if only because of the fact that it erased the border line between the concepts of "personality" and "individual", dissected personality into certain components, existing side by side, and deprived the concept of personality of its categorial content, its high degree of generalisation.

There is ground to believe that even at that time, i.e., in the 1960s, psychologists were not satisfied with the results obtained through the "collectionist" approach. Certain difficulties surfaced, linked with the transition from the general psychological interpretation of personality to examining problems involved in its formation by age-groups and pedagogical psychology, the rehabilitation of the concept of personality in medical psychology and pathopsychology and, finally, to its study within the system of inter-personal relations of social psychology. This placed on the agenda the question of structuralisation of numerous personality qualities (whose number was calculated to be one and a half thousand at least). Beginning with the mid-1960s, efforts were made to disclose the general structure of personality. It was undoubtedly a step forward compared with the "listing" interpretations of the psychology of personality prevailing in the past.

However, it soon transpired that the general personality structure is for the most part interpreted as a certain totality of its biologically and socially determined traits. The problem of the relationship between the biological and the social therefore became since then central in personality psychology. The All-Union Symposium on Personality Problems (1970) was held in many respects under the banner of interpreting personality as a bio-social being and of the structural approach to personality. One of the most important reports opened with the following passage: "Today there is probably not a single Soviet psychologist or sociologist who would not use

the word 'structure' in speaking of personality". Though the interpretation, of the personality structure evoked debate, the view gradually prevailed that two substructures, an "exclusively socially-determined" and an "exclusively biologically determined" should be singled out in personality. At times it was noted that yet another two substructures could be delineated as well (experience and the individual specific features of the forms of reflection), but it was not stated to which sphere—that of the biological or of the social—they belong. It was only noted that they are of an intermediate nature.

It would not be surprising if a person, an individual were at stake. The bio-social nature of man and his individuality cannot cause any debates. But personality, which is both the subject and the product of social development that turned a biological being into a creator of the historical process, understandably, could not preserve the biological substructure, existing side by side with the social one. Indeed, it is really impossible to put the sign of equality between the concepts of personality and man, personality and individual, and even less so to forget about it in dealing with the problem of the relationship between the social and the biological.

Man is really a bio-social being. His soma, his endocrine system, as well as the advantages and defects of his physical organisation exert a powerful influence on the course of his mental processes and on the formation of his psychological specific features. However, the biological, as it enters human personality, becomes the social, passes into the social. Thus, cerebral pathology accounts for the appearance in an individual, in the structure of his individuality, of certain specific biologically-determined psychological traits. However, they do, or do not, become personality features, i.e. peculiar, specific traits of personality, depending on the social factor. It is the historical background that is responsible as to whether this individual as personality just remains an imbecile or becomes a worshipped God's fool, i.e. a kind of historical figure whose prophecies are given respectful attention. It is the

historical environment that accounts for the formation and manifestation of these individual-psychological features. Thus natural, organic peculiarities and features are manifested in the personality structure as its socially-determined elements.

Towards the end of the 1970s, orientation on the structural approach to the problem of personality with all its strong and weak points was replaced by the tendency to apply a systems approach (B. F. Lomov). Should we speak in this respect of the setting in of some new stage in the development of Soviet psychological theory? The question is quite legitimate, if one considers that it is not so simple to note the difference in the use of the concepts of a "structural approach", a "systems approach", or a "systems-structural approach". Still, there were certain grounds for announcing the setting in of a new stage in the theoretical evolution of Soviet psychology. In the final account, the crux of the matter does not lie in a rapprochement between the concepts of a "structure" and a "system", but in what is actually hidden behind the application of each of these concepts on the plane of a concrete psychological study. Methodological and experimental activity in the guise of the structural approach led psychologists to concentrate on the classical question: the relationship between the part and the whole and the whole and the part, between the integral structure of personality and its substructures, and vice versa. The "structuralistic" declarations were not in their time forestalled by a methodological processing. The philosophical analysis of the concept of personality structure did not come before a psychological analysis—and this inevitably affected the results.

The situation is quite different in the application of the systems approach to the problem of the psychological theory of personality. The use of this method was forestalled by long-term and efficient work of the adherents of this approach, reflected in the writings of V. P. Kuzmin, E. G. Yudin, I. V. Blauberg, V. N. Sadovsky and many others. They provided a sound methodological substantiation of the new approach which ensured a serious tackling of concrete psycho-

logical problems. It was necessary to master the general principles of the systems analysis, and only after that it could be used in psychological personality studies. And yet it is not so simple to effect that in practice. For example, the principles of systems analysis needed to develop the theory of personality, require that the systems-forming trait of personality as a system should be identified, and this trait should be sought for not in general systems concepts, but in the context of psychological reality itself. This is a no simple task. It can only be fulfilled by psychologists themselves.

That is why analysis of the current concepts of personality performed from a systems approach should be viewed as a serious theoretical problem, and should by no means be reduced to a mere declaration. Here we can only make an effort to elucidate a few problems and point out certain objects that could be brought under examination.

It should be recognised that over the recent period, several concepts of personality have been developed in Soviet psychology, based on the principles of a systems approach. First of all, we should recall the theoretical propositions of the scientific school of D. N. Uznadze, which discerned the modus of an integral personality in the set, primarily in the fixed one. We can also consider the dispositional concept of personality formulated by V. A. Yadov, which is rather close to the former one; Yadov represents personality as a kind of a hierarchical system making possible regulation of social behaviour by the level. A number of other concepts may also be mentioned—those proposed by N. I. Nepomnyashchaya, L. I. Bozhovich and others.

B. G. Ananiev, a Leningrad psychologist and follower of Bekhterev, characterised his concept of personality, which he suggested in the late 1960s-early 1970s, as a complex approach to man as an object of knowledge. He considered man's individual development on three planes: first, as the evolution of psychophysiological functions characteristic of man as an individual in ontogenesis. Second, as the history of his development as the subject of activity. Third, as the charac-

teristic of his path of life, in which he emerges as a personality. The properties of the individual, the subject of activity and personality combine to produce a unique individuality of each particular person.

The characteristics of personality as a social being depend on the conditions of its existence in the given historical epoch. Only if one sees personality as an object of social development, can he understand the internal conditions of its emergence. Personality is always a concrete-historical phenomenon. It is a product of its epoch. Research into personality cannot but be a historical study. In this sense, man's development is the result of interaction between his path of life, his personal life story and the history of society to which he belongs. Man is a participant of historical events, a member of communities which are the subjects of social processes. Thus, a psychological study of personality amounts to its historical, sociological and socio-psychological investigation. Ananiev sees it as "a single and major way of its study". Hence the conclusion that only through the joint effort of psychologists, sociologists, historians, physiologists and representatives of many other sciences dealing with man, and given a complex approach to the problem of cognising man, can we reveal the laws of his consciousness, behaviour and activity. Only in this way may we hope to fathom his personality, his individual-psychological peculiarities.

Ananiev's views on the nature of the human personality and the method to be applied in studying it are close to those held by another prominent Leningrad psychologist, V. N. Myasishchev.

The central point in the concept of personality proposed by Myasishchev consists in the relationships which make up the core of personality. These relationships are the result of experiences the given person has accumulated; they enable him to make assessments of what occurs in himself and around him. Myasishchev's concept of personal relationships reveals the influence of Lazursky's characterology—like Ananiev, Myasishchev follows Lazursky in making the category

of relationships the basis of the character origin and reveals the unity and diversity of personality through the interaction and diversity of the relationships. According to Myasishchev, man's personal relationships present an integral system of the personality's selective links with various aspects of objective reality, stemming from the entire history of its development and internally determining its actions and emotional experience. Mental phenomena, from the highest to the lowest, are all linked with personal relationships. Myasishchev emphasised that the accepted formula of the "transformation" of personal relationships into character traits and even temperament, should not be understood literally. "Actually, personal relationships do not turn into anything else," Myasishchev wrote. "They may become more stable and be better reflected, they may assume a greater significance and, while still remaining relationships, become typical of a personality. It is in this sense that they constitute the traits of the character."

Myasishchev's theory is sometimes difficult to understand because his concept of personal relationships is multisemantic: they may be interpreted as relations between certain persons, as an objectively formed pattern of people's interaction, sometimes arising independently of their will and consciousness, i.e. as inter-individual relations. They can also be understood as the attitude of a person to another, as a subjective pattern of the causes and results of this interaction that emerges intra-individually. The problem of the unity of an inter- and intra-representation of personality, eliminating its pseudo-alternative, finds new solutions in the psychology of personality and is being given a new impetus for development in the 1980s.

Turning to the ideas once formulated by A. N. Leontiev is especially relevant today. He maintained it was wrong to identify the concepts of personality and individual because personality is a "specific quality" an individual acquires due to the social relations in which he finds himself involved. The goal of a psychological study of personality is, as a result, formulated as the "study of what man utilises" out of the

store of treasures of his inborn and acquired qualities, why, and how he does it.

As an instrument of analysis, psychologists employ the concept of "personalised meaning" introduced by Leontiev (reflection of the relation of the motive to the goal in the consciousness of a person); it is a specific, "extrasensual" quality of an individual. Personalised meanings are integrated into an interlinked system designated by the term of "semantic personality formations". It is emphasised that tangible progress can only be achieved if in concrete research consideration is given primarily to the derivative nature of semantic formations in relation to the subject's actual being, i.e., if they are based on the principle of mediation by activity. To analyse and transform semantic formations, it is necessary to trespass the framework of the formations themselves and to modify the system of activities generating them.

The principle of mediation by activity was further elaborated in the stratometrical concept which regards inter-personal relationships in any developed group as mediated by the content, values and organisation of the activity. The stratometrical concept was evolved by A. V. Petrovsky who subsequently created on its basis the theory of activity-mediated inter-personal relations and personality development.

Mediation by activity is viewed as a systems-forming trait of the collective, which determines its major socio-psychological characteristics. Fulfilling its goal in a concrete object of activity, the group changes itself, improving its structure and transforming the system of inter-personal relationships within itself. The nature and orientation of these changes depend, in the final count, on the concrete content of the activity and its values, selected from the pool of a broader social community. Turning to the mediation of inter-personal relations through joint activity, makes it possible to realise the nature of group differentiation and integration; to divide all the groups by type and reveal the specific traits of groups of a higher development level (collectives) by bringing to light their fundamental qualitative distinctions (using qualitative

indices) from other small groups. It makes it possible to orientate psychologists engaged in practical work towards defining tangible parameters of the group development, thus facilitating the fulfilment of tasks involved in diagnosing the group's deficiencies and forecasing the future results of its activity. It enables one to see the complex, multi-structural (stratometrical) nature of the structure of interpersonal relationships and the need for considering to which concrete level (the strata) of group processes do the phenomena, revealed during the investigation, belong. The researcher can characterise the collective as a community in which the individual is ensured the best possible conditions for satisfying his need to be a full-fledged personality and to develop all his capabilities. These advantages make it possible to contrapose the new concept to all one-dimensional concepts of group dynamics and other theories current in the Western, primarily U.S. psychology of small groups, irrespective of the orientation of a particular scientific school. A number of concepts have been introduced into scientific circulation to designate certain socio-psychologial phenomena and specific methods suggested for determining the parameters of the group and personality in the group reflecting these phenomena.

The inter-personal relations constituting personality in a collective, externally, i.e., on the behavioural level, emerge either as the subject-subject relation (communication), or as the subject-object relation (object-related activity), with personality as the subject of these relations. However, mediation remains the central link in both types of relations. It is around mediation that the communication and activity rotate as an integral system of the ties between the individual and his social environment. On closer examination, it transpires that immediate subject-subject ties exist as mediated subject-object-subjective relations. The relation of one individual to another is mediated by the object of activity, i.e., the activity content. In turn, the act which on the behavioural level seems to be a direct act of the individual's object-related activity, is actually that of mediation, with the mediating link being

for the individual not the object of activity, not its meaning, but the personality of another individual as a participant in the activity, emerging as a refracting device, as it were, through which he can better perceive, comprehend and sense the object of activity. The subject-object relation thus turns into a subject-subject-objective relation.

This enables us to interpret personality—and here we see one of the facets of its "extra-sensual" nature—as an integral (aggregate) subject with respect to a stable system of subject-object-subjective and subject-subject-objective relations, arising in activity and communication and exerting influence over other individuals.

Presenting personality as a part of a relatively stable system of these relationships, we have managed to eliminate the contraposition of personality to its social environment, its group, and that enables us to regard personality from a systems approach, i.e. in its unity with the conditions of the social environment in which it develops and manifests itself as the subject of mutual relationships and with the object-related content of its activity and with other people. The individual acquires the "extra-sensual" qualities of personality as the possessor of the characteristics of stable relations. In this context, the unity of the individual and personality only emphasises that the one cannot be reduced to the other.

Thus, certain prerequisites for the formulation of a general psychological theory of personality have appeared.

However, the majority of psychological works published during recent years have been almost unanimous in confessing that there exist no general psychological theory of personality. Many, after a few words concerning the importance of personality studies, just pass to examining some of its aspects, thus avoiding the question of the possibility to set up a general theoretical proposition. L. I. Bozhovich, a prominent researcher of personality problems, wrote as far back as 1968 that there is no elaborated, single psychological concept of personality and its formation in Soviet psychology.

Has the situation changed over the recent decade and a

half? Personality studies have made noticeable progress, no doubt. Vast empirical material has been accumulated. A number of new approaches to the interpretation of its development and place in the system of interpersonal relations have been proposed. New ideas concerning the relationship between the biological and the social, personality and individuality, etc. have been formulated. However, all these approaches (views, notions and concepts) can at best be regarded as "middle-range theories" (isolated conceptions) which cannot claim to encompass psychology of personality as a unified object of research. All are concerned with isolated aspects of personality and, since they are not at all correlated with one another, have no right to lay claim to the title of a single theory of personality. Thus the deplorable situation persists.

Soviet psychologists cannot take comfort in the fact that there is no unified theory of personality in Western psychology either, and that there, too, the relevant problems are only tackled on the level of "middle-range theories". The motley pattern of philosophical concepts looming large behind numerous theoretical propositions of Western psychologists, the eclecticism of their positions often passed for a broad view of scientific facts in which they even sometimes take pride—all this cannot but prevent the creation of a firm basis for formulating a single theory. There is the impression that the times have gone never to return when "great" psychological theories" like those of Sigmund Freud and Kurt Lewin were advanced and that an imprint of shallowness is clearly revealed in the manifold theoretical efforts of personologists. They may present considerable interest in themselves but their vividly portrayed mozaics cannot be organised into a system.

In this context, one can perfectly well understand a detached onlooker who would ask the following question as he tries to take stock of the present state of psychology of personality: Why is it that Soviet psychologists, who have been basing themselves on Marxism for half a century now—the

philosophy which offers the widest opportunities for elaboration of any scientific problem in methodological and theoretical terms—have not yet discovered how the general psychological theory of personality could be established?

There is a great temptation to explain it by subjective reasons—the absence of due mutual understanding between various schools and trends, the scholars' indisposition to lend a benevolent ear to the views and ideas of their colleagues (and sometimes even to read in time their articles or books), a certain isolation, an overindulgence in their own ideas typical of scholars in general, or their fidelity not so much to the traditions as to the stereotypes which have emerged in the course of history and prevent them from readily perceiving the new. No one would dare deny that all of these factors do occur, and rather often at that. But for a historian of science to substitute a psychologised interpretation of the process of evolutlion of scientific ideas for an objective analysis of this process would be tantamount to accepting a deadlock.

Characterising the categorial structure of psychological science, M. G. Yaroshevsky points out five categories, each of which deals with one of the aspects of psychology's subject-matter: the image, action, motivation, psycho-social relationship, and the triad "organism—individual—personality". Categorial analysis makes it possible to see, behind the empirical and theoretical propositions of any psychological system or specific conception, the outlines of their categorial apparatus, whose existence may remain hidden from the creators and followers of these conceptions and systems. The comprehension of the categorial apparatus, its explication in the reflexion of a science is one of the conditions for the creation of the relevant methodology of research. There is no ground to believe that all these categories simultaneously became an object of reflexion, as well as of methodologically and theoretically organised study. Mastering of these categories on the basis of Marxist philosophy proceeded in a certain order, giving birth, in the course of the inexorable process of the

evolution of scientific knowledge, to a diversified system of notions, concepts, empirical studies and accumulated data, thus making up the concrete content of the various branches of psychology, as was shown above.

From the mid-1920s to the mid-1960s, Soviet psychology, basing itself on Marxist-Leninist ideas on the psyche as the property of specifically-organised matter reflecting the surrounding world, was mastering the categories of the image, action and motivation on the methodological, theoretical and empirical planes. The so-called psychophysiological and psychological-gnoseological problems were adequately resolved in the works of Soviet psychologists Vygotsky, Rubinstein, Luria, Leontiev, Ananiev, Bozhovich, Zaporozhets and others, who all relied on the works and ideas of Sechenov, Pavlov, Bernstein and other Russian scholars. Their intensive work over that period stimulated psychophysiological research and an in-depth study of the cognitive processes, their evolution and motivation.

At the same time, the "psychosocial relationship" and the triad "organism—individual—personality" up to the early 1970s were not brought into the limelight of psychological science, though they implicitly entered the discipline's categorial apparatus (as today, for example, "action", "image" and "motivation" are not excluded from the categorial structure either). It is a matter of the transformation of the paradigm of Soviet psychology, which brings to the fore the problem of personality.

The transformation we imply has been caused by many circumstances. First of all, by the noticeably enhanced general interest in the problem of man over the two recent decades, as well as in human relationships and the collective—an interest reflected in an intensive development of sociology and social psychology, which in the recent past were not accorded a legitimate place within the structure of the discipline and had no opportunities for evolution. Suffice it to recall that at the First Congress of the Society of Psychology in 1959, there were no reports on social psychology and just a

few statements were made pertaining to the psychology of personality, or, to be more exact, to the problem of individual distinctions, while at the Sixth Congress, held in 1983, half the symposia were devoted to various aspects of social psychology and psychology of personality. Recently, all social sciences, including psychology and pedagogics, have advanced to the fore the tasks of raising an all-round, harmoniously-developed personality, enhancing the role of the human factor in accelerating social progress in the USSR.

Marxist views on man's social essence, on the individual's inclusion into the historically changing system of social relations, constitute an organic part of the interpretation of such categories as a "psychosocial relationship" and the triad "organism-individual-personality". They provide for them a methodological base and determine the general approach to mapping the programme of research in the field of intensively developing social psychology and psychology of personality.

In the context of these ideas, the complex and systems approaches to the study of man are forming (Boris Ananiev representing the first, and Boris Lomov the second). Proceeding from Rubinstein's ideas, the conceptions of personality as the subject of activity arise (Abulkhanova-Slavskaya) and the conceptions of relationships is formulated (Myasishchev), as well as of integral individuality (Merlin), and personalisation (Vadim Petrovsky). Historical-evolutionary conceptions on the development of personality and emergence of individuality are evolved (Asmolov), and on the individual work style (Klimov). The theoretical-methodological elaboration of the problems of social psychology becomes much deeper (Platonov, Parygin, Shorokhova, Lyudmila Buyeva), and research has been undertaken into the problems of social perception and communication (Andreyeva, Bodalev), leadership (Volkov, Robert Krichevsky), management (Kitov, Alexei Stolyarenko, Filippov), improvement of interpersonal relations and personality (Karvasarsky, Valentin Krishtal), personality formation and multi-level socially useful activity (Feldstein).

Yaroshevsky proposes his conception of a scientific team (collective) and Arthur Petrovsky presents his stratometrical conception. Experimental studies conducted by Kolominsky, Kuzmin, Khestno Liimets, Vladimir Yadov, Umansky, Obozov and Chernyshev constitute a significant contribution to the elaboration of applied aspects of social psychology.

All this reveals that the present level of research into problems involved with personality is high enough to make use of the categories of "organism—individual—personality" and "psychosocial relationship" for developing a general psychological theory of personality. The following propositions are, in our opinion, of particularly great importance, all of them formulated in the context of Marxist approaches to personality.

First. "Natural, organic aspects and features emerge in the structure of personality as its socially-determined elements. The biological exists in a personality in a transformed form, as the social" (Arthur Petrovsky).

Second. "The movement of activity, the process of its exposition inexorably leads to the compression of restrictions initially inherent in the situation... Potential restrictions of activity, understood in the given case as the contraction of the subject's opportunities in the sphere of the process of overcoming, can also play the role of its object. These restrictions stimulate specific activities directed towards their overcoming. This, actually, determines the activeness of a personality" (Arthur Petrovsky).

Third. "Personality is not identical to an individual. It is a specific quality an individual acquires in society... Personality is a systems, and therefore an 'extra-sensual' quality, though its possessor is a quite sensual, corporal individual with all his inborn and acquired qualities" (Alexei N. Leontiev).

Fourth. "A materialist philosopher, who understands the 'corporality' of personality not in a narrow sense, who sees it primarily in an aggregate (ensemble) of object-related tactile relations of a given individual to aonother individual (other individuals), mediated by the things created by their lab-

our [to be more exact, through their activity involving these things.—*A.P.*], will look for the resolution of the 'personality structure' in space, outside the organic body, the individual, and precisely for this reason—paradoxical as it may seem—precisely for this reason in the personality's internal space" (Evald Ilyenkov).

Fifth. "...Personality can only be understood within the system of stable interpersonal relations, mediated by the content, values and meaning of a joint activity for each of its participants. These interpersonal relations are inseverable, they are quite real, but they are 'extra-sensual' in their nature. They consist in concrete individual properties though they are not reducible to these. They are given the researcher in the manifestations of personality of each of the group's members, though at the same time forming a specific quality of the group activity itself which mediates these personal manifestations, i.e., the semantic formations, an interlinked system of personal meanings, determining the specific position of each individual in the system of inter-individual ties, or, in the broader sense—in the system of social relations" (Arthur Petrovsky).

Sixth. "The individual's 'personality' emerges in the three aspects of its psychological interpretation: intra-individual, inter-individual, and meta-individual attributions... Personality can be exposed in terms of its composition, its structure, only if seen in the unity of these three aspects. It emerges as the representation of the individual, manifested and mediated by his social activity, in other people, in his ties with these people, and finally, in himself, as a representative of the social whole" (Vadim Petrovsky).

Seventh. "...The postulate of maximalisation, i.e., the effort of the individual to achieve a maximal personalisation generating the following theoretical hypotheses: 1) any emotional experience the individual perceives as valuable in terms of designation of his individuality, actualises the need for personalisation and determines the search for a meaningful other, in which the individual could be ideally represented;

2) in any communicational situation, the individual tries to determine and realise those aspects of his individuality, which can be personalised in this particular case. If personalisation cannot take place, the individual starts a search for new possibilities in himself or in his object-related activity; 3) all other conditions identical, the subject prefers that out of his two or more partners in communication, who ensures him a maximally adequate personalisation. Analogously, preference is given to that person who can guarantee a maximally long-term personalisation... The intensity of the need for personalisation is the third variable" (Vadim Petrovsky).

Eighth. "The source of the development and consolidation of personality is ... the contradiction, emerging in the system of inter-individual relations (in groups of various development levels), between the personality's need for personalisation and the objective interest of the given community, to which the individual refers, in accepting only those manifestations of his individuality that correspond to the tasks, norms and conditions of this community's functioning and development." "...Personality is formed in groups that are hierarchically placed on the rungs of the ontogenesis, and the character of the personality's development is determined by the development level of the group in which it is included and integrated" (Arthur Petrovsky).

These constitute the initial fundamental propositions which could serve as the reference-point for elaborating a psychological theory of personality. The crux of the matter is that not only the general methodological and ontological scheme (as important as it is) is provided here, but that the theoretical proposition under study is represented in its inherent characteristics and ties. These ties manifest themselves in all branches of psychology—not only in so-called general psychology but also in social, age-group, pedagogical, juridical psychology, in psychology of management, in pathopsychology, etc., and play a programming role with respect to the corresponding practical spheres—education, production, medicine, jurisdiction, etc.

Like any scientific theory, the theory of personality should meet the general methodological demand—to provide an integral idea of the laws and essential ties within a certain area of reality—man's personality. The theory must propose an integral (though internally differentiated) system of knowledge, which would contain methods that can predict, not only explain, the emergence under definite conditions of definite phenomena and which would be characterised by a logical dependence of certain of its aspects on others. We have attempted, in citing the eight theses from the psychologists' works which could serve as a prologue to the forthcoming theoretical proposition, to show the aggregate of statements (postulates, propositions, laws, etc.) which could comprise the starting base for formulating the general psychological theory of personality. This would make it possible to create a theoretical model of essential links evident in the definite psychological reality—human personality. The inception of the theory of personality cannot be divorced from its empirical foundation which embraces a vast quantity of facts accumulated in general, social and child psychology, in pathopsychology and psychotherapy through isolated experiments that are still not analysed and summed up.

In the most general way, the theory of personality can be described as a theoretical abstraction, ensuring the subsequent advance to the concrete. It is only by developing it from the abstract to the concrete that we can evolve it into a system of interlinked conceptions, whose content includes statements supported by their empirical proofs and by relevant methods with a diversified phenomenology. Concrete theoretical propositions could be developed based on the aggregate of the general theoretical principles introduced. However, if all these conceptions (meaning not all the existing theoretical propositions current among psychologists both in the Soviet Union and abroad but only those consonant with the general principles indicated above) have already been launched into scientific circulation, all that remains now is to find a place for them in the general theoretical scheme and thus provide

for the logical dependence of some elements of the theory on others. "Theoretical cognition ought to give the object in its necessity, in its all-sided relations. . ."[1]

What is the theory of personality, its most general model? It should essentially coincide with the definition of personality, given within the system of the most important links and dependencies and meeting the above-mentioned major general scientific methodological principles of determinism, systems nature, and evolution. The theoretical model of personality should be presented as a systems quality of their subject, the individual, possessing a three-link structure (intra-individual, inter-individual and meta-individual representations), developing in communication and joint activity and mediated by the latter, the quality which is determined by the subject's active inclusion into social relations.

In what way does compliance with the general scientific methodological principles manifest itself here?

The *principle of determinism* as applied to the psychological theory of personality is oriented not only to the idea of causality as the totality of circumstances preceding the consequence in time, but also to its other forms (Yaroshevsky): to systems determinism seen in the dependence of the system's separate components on the properties of the whole, and on purposeful determinism, in accordance with which the goal determines the process of achieving the result as a law. The idea of the personality's activeness and its thrust, that developed in Soviet psychology beginning with the latter half of the 1930s, created the methodological prerequisites for the realisation of the principle of determinism on the level of the category of a "psychosocial relationship". As Yaroshevsky emphasises, Soviet psychologists interpreted determinism as the action of "external causes via internal conditions" (Rubinstein) and also as the action of the "internal via the external" (Leontiev). The Marxist deterministic view that the subject himself undergoes a change as he modifies the world

[1] V. I. Lenin, "Conspectus of Hegel's Book *The Science of Logic*", *Collected Works*, Vol. 38, p. 211.

in his activity, which in fact explains the individual's pesonality transformations, was spread by them to the sphere of interpersonal ties, in which the category of the psychosocial relationship manifests itself to the fullest extent. The individual in his object-related activity changes the surrounding world and transforms himself in the process, becoming a personality. In the same way, the social group, within the context of its joint socially significant activity, constructs and modifies the system of interpersonal relations and interpersonal interaction, becoming a collective. This is clearly seen in the phenomena of interpersonal relations. A collectivist self-determination with respect to the aims of the group's activity emerges as a result of the collective's active performance aimed at translating into life the aims it has been set, i.e., interpersonal relations are transformed by the activity of the collective, directed outwardly at the appropriation of a socially significant object rather than at these interpersonal relations themselves.

The evolution of personality as a systems quality of the individual is socially substantiated, though the individual himself possesses biological prerequisites for his own development. As Marx noted, ".. .The essence of man is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations."[1] If man's generic essence, as distinct from all other living beings, consists in the totality of all social relations, then the essence of each concrete man, an abstraction inherent in a separate individual as a personality, comprises the totality of separate ties and relationships, in which he is included as the subject of communication and activity. These ties are to be found in social being, i.e., outside man, and are therefore impersonal, objective, and at the same time they are to be found inside him as a personality and are therefore subjective and affectively biased.

The *principle of development* as represented in the psychological theory of personality is a concretisation of Marx-

[1] Karl Marx, "Theses on Feuerbach", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 5, 1976, p. 4.

ist-Leninist dialectics as the general theory of development. It is realised in an interpretation of the process of the transformation of the individual's biological structures into the socially determined structures of his personality. Proceeding from the Marxist ideas on the unity and struggle of opposites and on the transformation of quantity into quality, the notion of the personality's sociogenesis is formed as an interaction within it of two opposite tendencies of preservation and modification of the social systems developing in the historical-evolutionary and the historical-revolutionary processes.

Personality development in ontogenesis is determined by the existence and overcoming of the contradiction between the individual's need for personalisation and his ability to be personalised through a corresponding activity in the social situation of development, i.e., by the need for and the ability of being a personality.

The *systems principle* (or systems approach), when present in the methodological model of the theory of personality, makes it possible to represent it as an integral whole in which links of different quality and level are identified, as the synthesis of structurally functional and phylo-ontogenetic concepts. The overcoming of the "collectionist" approach to personality, which deprived the concept of personality of its due categorial content, revealed that it was necessary to resort to a systems approach in elaborating the psychological theory of personality (personality as a systems social quality of the individual). However, the necessary principles of systems analysis have always required the formulation of a "systems-forming principle". For that, it was necessary, first, to overcome the "Ptolemaic" interpretation of man in favour of the "Copernican" (Leontiev), as a part of the social whole, as a system of social links; and second, to overcome the "postulate of spontaneity". All this was possible in the systems analysis of the categories—a "psychosocial relationship" and the "organism—individual—personality", performed with consideration simultaneously of the psychological theory of collective (the stratometrical conception) and the psychologi-

cal theory of personality. They had to intersect, and they really intersected in the central point of both theories—in revealing a systems-forming principle, which was found to be the principle of mediation by activity.

The systems-forming principle is that general, and not always by far explicated principle, by means of which a theory is outlined and formulated. Methodologically, the essence of this principle in developing the theory of personality consists in that the relation of one person to another, just as the relation of the development of personality quality to its result, are conceived through resorting to a third object—an object-related activity which is of a joint nature in its most advanced form, being the consequence of people's unification in labour and communication. The interpersonal relations and qualities of the developing personality, being initially mediated by the content and organisation of the joint activity, exert an influence, in turn, on the process and results of that activity: the subject-object-subject links emerge in unity with the subject-subject-object links as the two sides of a single system.

The principle of mediation by activity as applied to interpersonal relations, personality and its development is the most general systems principle in the formulation of the general psychological theory of personality, in which the general scientific methodological principles of determinism and development are realised.

It is expedient to pass from concrete methodology as a system of principles and ways of developing the theory of personality to the description of its ontological model, noting the basic categories in the analysis of the object of the theory and revealing the principles of their correlation, i.e., its conceptual apparatus.

The concepts of individual, personality, individuality, activeness, activity, communication, group, collective, consciousness, development (biogenesis of an organism and biosociogenesis of an individual, and personality ontogenesis and sociogenesis in the context of the historical-evolutionary proc-

ess) can serve as units of analysis for the theory of personality.

However, to develop an ontological model of a psychological theory, it is necessary to point out the principles according to which the basic categories in the analysis are correlated, which are applied to describe and interpret the psychological reality of interest to us. The most general principle of the correlation of categories included in the conceptual apparatus of the theory of personality, is recognition of the unity, but not identity, of the conceptual pairs forming it, taken as units of the categorial analysis of its general proposition. For instance, the concept of individual, while making unity with the concept of personality, cannot be regarded identical to the latter. The very recognition of the unity (not identity) of these concepts, and hence of the objects of analytical examination of the given psychological reality, faces the psychologist with the task of fathoming their correlation as a property (personality) and the possessor of that property (individual) and raises a set of fundamental methodological problems involved in their relationships—for example, by postulating the idea of the individual's need for, and ability of, being a personality. Thus, an ontological dismemberment emerges as a specific methodological problem.

The principle of unity, but not identity, of the basic categories of analysis refers not only to the concepts of individual and personality, but also to other components of the ontological model of the theory of personality: personality—individuality, activeness—activity, group—collective, biogenesis—biosociogenesis, ontogenesis—sociogenesis, and development of personality—development of consciousness.

It would be logical to pass from the methodological and ontological approaches to theory to revealing the possibilities contained in its initial postulates by advancement from the abstract to the concrete, and to evolve a system of interlinked theoretical propositions (concepts, "average-level theories"), that would be united and determined by the methodological and ontological principles considered above. It is only in this

way that it would be possible to embrace, within the framework of the above initial theses and methodological principles, the multitude of empirical data and concrete ways and methods related to the object under study—the psychology of personality—and to sum up the totality of statements and proofs, composing the basic stock of theoretical knowledge in this branch of science.

To this end three aspects of the concrete phenomenology of personality should be considered, a kind of three "ontological modalities": its *genesis, content dynamics,* and *structure,* and consequently the concepts advanced (or mastered) then, proceeding from the principle of mediation by activity, one could elucidate the laws of development of the psychology of personality manifested in these aspects (modalities), encompass the relevant empirical material by imbibing the phenomenology discovered in it, and find out and apply valid methods for obtaining that material. At the same time it is necessary and possible, having revealed the logical interdependence of constructed conceptions, to represent them as a single theoretical system, even though highly differentiated internally.

Let us begin with the *genesis of personality.* Here three methodologically substantiated tasks can be noted: (1) to study an individual's development as the result of interaction between the genotype and the social milieu, thus creating prerequisites for the emergence of personality (we shall call this process "biosociogenesis" of the individual); (2) to investigate the evolution of personality as an outcome of the activity-mediated interrelationships with reference groups in case of relatively stable communities and in case of its inclusion into different reference groups, hierarchically placed on different rungs of the ontogenesis, or if it changes its position in respect of these groups; (3) to analyse the specific features of the personality's sociogenesis and inter-personal relations, generated by its inclusion into labour activity within the framework of a definite socio-economic formation.

In conformity with these three tasks, three interconnected

concepts may be suggested which correspond to the principles of the psychological theory of personality.

The first concept can be conventionally called the psychogenetic concept of individuality (Ravich-Shcherbo); its followers investigate the origin of man's individual psychological features to discover the role played by the genotype and the milieu by mostly applying the twin method. They assert that a change of mechanisms takes place in ontogenesis, through which the individual's mental functions are realised. They maintain that replacement of elementary forms prevailing at its earlier stages by social forms mediated by the child's communication and activity, also takes place. In doing this, they verify a productive hypothesis, according to which, as the mechanisms are changed, the relation of the individual-psychological features to the genotype also changes: the greater the role of specifically human factors of social origin, the less the share of genetic variability in the formation and development of individual psychological factors in the evolution of man's individual psychological features. The concept under review is a direct elaboration of the neurophysiological conception of factors of individual-psychological distinctions revealed in the works of Teplov, Nebylitsin, and Merlin; throughout it opposes the theories which regard heredity as a fatal factor (Jensen, Hans Jurgen Eysenck), as well as diverse modifications of the theory of two factors.

The concept of developing personality (Arthur Petrovsky) is the continuation of the study of this set of ideas, having in mind the increasing role of the systems-forming factor—mediation by activity—in the formation of an individual's personality. This concept is based on the idea of three phases of the formation of personality in the social environment (micro- and macro-environment)—adaptation, individualisation and integration. Their origin and progress are linked to the individual's sociogenetic need for being a personality and the activity-mediated possibilities for satisfying the requirement in reference groups. On the basis of this concept, the periodisation of the evolution of personality according to age has

been proposed, which is not consonant with the earlier concepts of man's mental development and is opposed in principle to non-Marxist notions of personality formation widespread in psychoanalytical, neo-behaviourist and "humanitarian" theories. Thus, this concept suggests a conceptualised solution to the second task noted above.

The third task—comprehension of sociogenesis—can be resolved through a historical-evolutionary approach to the interpretation of personality (Asmolov), based in turn on the principle of mediation by activity. The present approach elucidates the mechanisms through which personality contributes to socio-cultural history and projects the mediating factor as a systems-forming principle which ensures the evolution of personality and facilitates its specific historical features in different cultural systems—a joint object-related activity. The historical-evolutionary approach is fundamentally opposed to non-Marxist structuralist and sociological-anthopological theories.

Thus, all three theoretical propositions are interlinked and correspond to the general methodological principle—mediation by activity. The same is true of other concepts considered below.

Turning to the *dynamics of the personality content,* we can again note three problems facing the methodology of the psychological theory of personality: (1) what is understood by the content of the individual's personality characteristics; 2) is this content stable and what ensures that stability; and 3) what is the factor which can and does discontinue this stability, i.e., what is the dynamics of the personality content?

Various concepts, some more advanced and others less so, may be employed here, all connected by logical links.

The first is the concept of the semantic personality formations, formulated by a group of Leontiev's followers. Central to this concept is the notion of personalised meaning as an individualised reflection of a personality's actual relation to the objects which induce a person's activity ("the meaning for myself"). It is in fact the fixation of a person's require-

ments in an object. Personalised meanings are integrated into a cohesive system of "semantic personality formations", which include the motives inducing a person to activity; his relation to reality realised in his activity and transformed for him into a value (value orientations); an individual's notions of himself, underlying his interaction with other people and his attitude to himself as "another person" ("self-image" or "self-concept"). The main characteristic of personalised meanings is their dependence on the place a person occupies in the system of social relations, the "social situation of development", i.e., his social position. Here the system of mediation by activity emerges as systems-forming, explanatory and constructive. In order to examine and transform semantic formations, it is necessary to overcome the framework of these formations and change the system of activity which generates them.

The following two problems have been reflected in the concepts involved in the "smaller dynamics" of the personality content, i.e., of the processes involved in the generation and transformation of semantic personality formations within the context of the dynamic activity in which the individual is included.

The first one is the dispositional-set concept (we are attempting to embrace by this conventional name the theoretical propositions describing the mechanisms the personality draws upon to stabilise the movement of activity). This concept is based on the ideas and findings of Uznadze's followers (Nadirashvili and others), Vladimir Yadov's dispositional personality theory, etc. Asmolov draws on the principle of activity approach to elaborate on a hypothesis concerning the hierarchical-level nature of the set as a mechanism for stabilising activity while turning to the "smaller dynamics of semantic formations". The functions and phenomenological manifestations of sets hinge on the level of activity on which they are functioning (the level of semantic, goal-oriented or operational sets). Different-level sets stabilise the movement of activity realised by a personality, thus making it possible to

preserve its general orientation under changed conditions. If a methodological and theoretical integration of the various notions of the essence of the set integrate at times (note its manifest opposition to psychoanalytical interpretations), the dispositional-set concept can become an organic part of the psychological theory of personality based on the principle of activity mediation.

The concept of supra-situational activeness advanced by Vadim Petrovsky is closely connected with the notion of the set as a mechanism for stabilising activity. In conformity with this concept, there are transitions in the movement of activity from the state of temporary stability (due to the stable semantic and goal-oriented sets developed by a person) to a supra-situational activeness of the subject of activity, which discontinues this stability. The personality is thus elevated to new levels of fulfilling its vital tasks, which in its turn is possible only under the conditions of relative stability of its choice.

The methodological credo of the concept of supra-situational activeness consists in overcoming the "expediency postulate" in its diverse varieties—homeostatic, pragmatic and hedonistic. The expediency postulate amounts to ascribing to the subject an intrinsic effort towards an "internal" goal, with all manifestations of his activeness being aligned with it. The concept now distinguishes between the moments of performing an activity and of its movement. It interprets the subject's own activeness as moments in the movement of his activity, its expanded reproduction and enrichment of a person's individual activity by the socially-set motives and goals. The subject's own activeness is evident in the acts of his going beyond the framework of the situation. It constitutes the overcoming of certain restrictions, of "obstacles inside us", actions performed despite one's adaptive impulses, interests and sets.

When we turn to examination of the *personality structure,* we are again faced with three problems: to characterise, in mutual connection, the inter-, intra-, and meta-individual representations of an individual.

Correspondingly, three concepts can be exposed: of the mediation of inter-personal relations by activity, of the intra-individual representation of personality and of personalisation.

The conception of activity mediation of inter-personal relations, considered within the context of the inter-individual representation of personality, treats inter-personal relations in any sufficiently developed group as mediated by the content and values of the activity. Drawing on the principle of mediation, as has been earlier emphasised, one can understand the nature of group integration, to perceive the multi-level (stratometrical) character of inter-individual relations, and to describe the collective as a group in which the individual is provided with the most favourable possibilities for satisfying his need to be a full-fledged personality and for developing his abilities. This serves to counterpose this concept in principle to the concepts of group dynamics, microsociology, and the theories of "small groups". The fact that interrelations in a group appear as bearers of the personality of its members helps overcome the false (from the viewpoint of the methodological postulates of the general psychological personality theory) alternative to treating inter-personal relations as manifestations either of a personality or of a group, i.e., the confusing of personality and group manifestations. The concept of social perception advanced by Andreyeva has substantially promoted the conception of the mediation of inter-personal relations by activity.

The individual's meta-individual representation is reflected in the context of the conception of personalisation. This describes the activity-mediated process, as a result of which the subject is individually represented in the vital activity of other people and can emerge in social life as a personality (Vadim Petrovsky). The need for personalisation is a deep-rooted and not always realised foundation of non-utilitarian forms of communication between people (altruism, affiliation, a striving for self-assertion, etc.). The chance to accomplish deeds, i.e., cause significant changes in social being, for which the individual is responsible to society (first of all, restructur-

ing the motivational-semantic formations, the personalised meanings of other people), is the determining factor in the individual's capacity for personalisation. The concept of personalisation is in principle opposed to "humanistic" psychology with its notions of "self-realisation" and "self-actualisation" as prevailing tendencies inherent in an individual.

An attempt to resolve the problem of the intra-individual representation of personality was made by Merlin, who advanced the concept of integral individuality, in which activity is presented as a mediating link in the bondage of the multilevel properties of individuality. He tried to base himself upon the unity of the stratometrical conception, that of personalisation (in the terminology used by Merlin, the notion of "meta-individuality") and the long-standing views in Soviet differential psychology concerning the essence of man's "intra-individuality", developed in the works by Teplov, Nebylitsin, Gurevich, Palei, and Merlin. Merlin's ideas were developed by Klimov, who elaborated the concept of the individual style of person's activity, which mediates the link between meta-individual and intra-individual properties determined by the characteristics of both the individuality and the collective, i.e., inter-individually. Merlin's views are opposed to those personality concepts formulated by Gordon Allport, Hans Eysenck and James Cattell.

The existence of an internal connection between the concepts dealing with the singled-out "ontological modalities" has been traced earlier and is quite evident. No less evident, however, are the "inter-modal" links. The notion of the individual's need for, and his ability of achieving personalisation is essential for comprehending what mechanisms determine the progress of a personality in its evolution from one phase to another. It also reveals that the possibilities of developing a personality depend on the development level of the group in which the particular individual is included. The idea of supra-situational activeness can be traced in the sociogenetical notions of excessive non-adaptive moments, ensuring the personality's self-development in the context of histor-

ical and cultural processes. The basic propositions of the psychogenetical concept generate certain approaches typical of the concept of integral individuality. Thus the whole conceptual model of the general psychological theory of personality proves to be a kind of a system of intra- and inter-modal ties which make up its structure.

At the present time, psychologists have at their disposal a vast store of conrete methods which are already in scientific circulation, or are being developed (the method of "reflected subjectivity", the methods of revealing collectivist self-assertion and collectivist identification, the modified methods of "personalised constructs", referentometry, etc.). In drawing on these methods the most important parameters of personality can be measured and the data processed to develop the corresponding systems of psychological diagnostics. We have only made a few initial steps in this direction (for instance, the promising principle of the "contraposition lattice in a group" was proposed).

To further concretise the initial theoretical postulates, it is necessary to create applied scientific concepts, which are indispensable for practical needs and constitute one of the most important sections of the general psychological theory of personality.

We can name three spheres of application of theoretical knowledge in personality psychology: *management, formation* and *correction* of systems in which the human factor is the leading principle.

The programming-role concept of the scientific collective is already functioning successfully in the sphere of managing processes concerned with the human factor. On the basis of the stratometrical conception, psychological principles of the selection and placement of personnel and intensive instruction, as well as the socio-psychological concepts of business games, concepts are formed on the need to consider the group development level in adopting managerial decisions and the conception of leadership and authority is outlined.

In the sphere of personality formation, the concepts are

advanced and applied concerning the development of personality in the multi-tier socially-useful activity, the emergence of personality and its cognitive processes in a collective-forming educational activity. The concept of age periodisation of the personality is formulated to allow a differentiated approach to a developing personality, as well as the concept of a mediated inception of semantic formations.

To rectify personality disturbances, group psychotherapy is widely applied, based on the principles of mediation by activity, as well as psychotherapy involving creative activities.

Of course, it would be wrong to think that these and other concepts are consciously built on the basis of the principle of mediation by activity. Nevertheless, this circumstance is not regarded as decisive in assessing the significance of the suggested approaches for tackling practical tasks and discovering whether these concepts are sufficiently promising. The main thing is that this principle is implicitly represented there. Thus, the evolution of these applied concepts is of substantial importance for both the solution of practical problems and the further elaboration of the general psychological personality theory.

The psychological theory of personality, as should be in any theory, is not only a system of statements, but also of predictions on the emergence of various phenomena, transitions from one statement to another without immediately resorting to sensual experience. A number of theoretically substantiated hypotheses were experimentally affirmed, such as: the hypothesis on the existence of a group emotional identification in collective type groups and its absence in groups with a low development level; on the personalisation of a creatively-gifted pedagogue in the phenomena of reflected subjectivity, manifested in his pupils; on the direct, and not feedback dependence of the educational effect on the size of the study group under the conditions of a collective-forming activity; on the subject-subject-object character of the perception of an object (S_1-S_2-0) when S_1 is personalised in the percepting subject (S_2), etc.

From this, it is clear the demands presented by the philosophy of science to the formulation of theories have all been taken into consideration. The methodological, ontological and conceptual models of the personality theory have been constructed on the basis of the initial postulates that made it possible to write down empirical data into the thinkable concreteness. Moreover, the logical intra- and inter-modal ties between the elements of its conceptual apparatus as a system have been discovered. Concrete methods have been advanced and the personality parameters investigated. The ways of its diagnostics have been outlined though not yet worked out. Certain applied concepts, implicitly connected with the general theory and dealing with the most important areas of social practice, have been pointed out and the great prognostical value of diagnostics for revealing the concrete phenomenology of personality has been shown.

It is not yet, of course, a fully formulated theory in its mature form, but only the initial moment of its inception, the first outline, a design of the future theory and its applications, as it were.

No doubt, the psychological theory of personality presented here is not the only plausible one to characterise the process of the formulation of scientific concepts of personality and its development current among Soviet psychologists. We could have indicated different approaches to this important problem (for instance, the concept evolved by X. A. Abulkahanova-Slavskaya, V. F. Morgun, and others), which though sceptically viewed by the author of this book, are not deprived of some scientific value. The author must confess his own partiality. This can well be explained by the fact that every historian, in assuming the role of theoretician, certainly cannot maintain absolute impartiality and objectivity. He hopes, however, this has been characteristic of his book. Another question may well be asked why does the author, in concluding a book dealing with psychology in the Soviet Union, turn to the personality theory and not, for example, to the problem of cognitive processes, or the theory of emotions or of the unconscious?

There must be, of course, certain historical reasons linked with the transformation of the subject-matter of psychology in the conditions of its new paradigm.

The subject-matter of psychological science is inevitably transformed when fundamental changes occur resulting from new discoveries and the restructuring of the thinking of psychologists in connection with certain shifts in their world outlook. A clear example is the transition, described in the first few chapters of the book, from recognising the non-material soul as the object of psychological studies to its interpretation as the psyche, i.e., as the special property of the brain, making it possible to reflect the world. The victory of natural-scientific materialism was confirmed in this progressive understanding of what psychology should study, though it must be admitted that certain historically-caused modifications of psychology's theoretical principles and their empirical foundations in psychology as one of social disciplines, have already wrought some irreversible shifts in the thinking of psychologists. In this connection, consideration of the actual transformation of the subject-matter of psychological research becomes indispensable, and hense requires a methodologically profound reflexion.

As early as the first half of the 20th century, interaction between individuals, the vital activities of social groups and communication within these groups entered the field of vision of psychologists on a par with the mentality of an individual, generating a picture of the surrounding world inseverable from his brain. This led to a turbulent upsurge in social psychology and its branches—psychology of management, ethnic psychology, etc. However, in realising the stable concept of the object of its study—the psyche, traditional psychology tried to see, in this area, too, but analogues of the mentaliy of an isolated individual, only postulating the existence of the forms of "collective" consciousness, or the unconscious, of a "group mind". The real object of research in social psychology came into contradiction with the general interpretation of the subject-matter of psychological science. This con-

tradiction proved to be impossible to resolve in principle within the context of positivist-orientated psychology with its counterposing the individual to society. For a long time, this contradiction was not adequately considered and overcome in Soviet psychology because it preserved certain old stereotypes, even though its shift to historical materialism provided all the opportunities for their elimination.

When Soviet psychologists began to regard personality as a social, systems quality of the individual, forming a unity (not an identity) with consciousness and the unconscious as well, they *de facto* expanded and changed the object of their investigations. The psyche, consciousness and the unconscious are now seen as only one aspect of the personality, man's intra-individual characteristic. The inter-individual representation extrapolating personality into the "area of inter-individual links" (Ilyenkov) appears in unity with it, and thus the alternative of the socio-psychological and the individual-psychological, fundamentally unresolvable for positivist psychology, was eliminated. In its meta-individual representation, personality emergers as an ideal representation of the subject in the vital activity of other people, as its personalisation. The development of personality in this case is not to be reduced only to the transformation of the mentality of the subject himself. It presupposes a restructuring of his reflected subjectivity in the vital activity of the surrounding people (for example, earning or losing prestige by a personality). The unity (not an identity) between the individual and the personality, the personality and a group, the personality and mentality, the evolution of the personality and the development of mentality, being the unity (not an identity) of the intra-, inter-, and meta-individual representation of the personality, comprises the basic methodological prerequisite of its probing and understanding. This allows us to presume that, given the actual transformation of psychology's paradigm, it is precisely personality, and not only its intra-individual representation—mentality that should be seen as a sovereign domain of psychological studies.

This is why the concluding—and actually the only—theoretical chapter of this book deals with the problem of personality in its modern interpretation.

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PSYCHOLOGY
IN THE SOVIET UNION

Arthur Petrovsky (b. 1924)
is a full member of the USSR Academy of Pedagogical Sciences and head of a chair at the psychology faculty of Moscow University. He has numerous monographs and other publications to his credit on general, social, pedagogical and age-group psychology.
In the present book, Petrovsky describes at length how psychology developed in the Soviet Union, tracing its path from the time it adopted Marxist principles to the present day, when it is engaged in research into the currently vital problems. He analyses the evolution of the most important concepts formulated by Soviet psychologists of world fame—Lev Vygotsky, Sergei Rubinstein, Alexei Leontiev, Alexander Luria, Alexei Zaporozhets, Pyotr Galperin and others, and emphasises the growing role the science of psychology plays in accelerating the socio-economic progress of Soviet society.

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